COURSE GUIDE

POL 312
LOGIC AND METHODS OF POLITICAL INQUIRY

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INTRODUCTION

POL 312 Logic and Methods of Political Inquiry is a one semester course in the third year of undergraduate students of Political Science. It is three-credit unit course to enable students have a comprehensive knowledge of logical political inquiry in the field of political Science. The purpose of this is to provide an overview of the methodological issues relating to the study of Political Science. The course examines logic, approaches and methods that underpin the study of politics, political inquiry and other researches in social sciences. The course explains the relationship between logic, approaches and methods in political science research; it explains the nature, features and basic assumptions underlying each of the methodological issues surrounding the study of political science, and provides an understanding and knowledge of how these issues frame the research methods in political science. The study units are structured into modules. Each module is structured into five units. A unit guide comprises of instructional materials. It gives a brief of the course content, course guide lines and suggestions and steps to take while studying. You can also find self-assessment exercise for your study.

COURSE AIMS AND OBJECTIVES

The primary aim of this course is to provide students of political science with a comprehensive knowledge of logic and political inquiry.
However, on successful completion of this course you will be able to:

- establish a working knowledge of logic and scientific method of political inquiry in the field of political science;
- be familiar with issues such as the formation and introduction of scientific methods of inquiry in political science; the functions of concepts and methods; and the various forms of generating data for political inquiry;
- state the challenges of the use of logic in substantiating political science as a science by methods of investigation.

The specific objectives of each study unit can be found at the beginning and you can make references to it while studying. It is necessary and helpful for you to check at the end of the unit, if your progress is consistent with the stated objectives and if you can conveniently answer the self-assessment exercises. The overall objectives of the course will be achieved, if you diligently study and complete all the units in this course.

WORKING THROUGH THE COURSE

To complete the course, you are required to read the study units and other related materials.

You will also need to undertake practical exercises for which you need a pen, a note-book, and other materials that will be listed in this guide. The exercises are to aid you in understanding the concepts being presented. At the end of each unit, you will be required to submit written assignment for assessment purposes. At the end of the course, you will be expected to write a final examination.

THE COURSE MATERIAL

The major components this course are:

1. Course Guide
2. Study Units
3. Textbooks
4. Assignments

STUDY UNITS

There are 5 Modules broken into 25 study units in this course. They are:

Module 1 Characterising Logic

Unit 1 Meaning and Nature of Logic
Unit 2 History of Logic
Unit 3 Types of Logic
Unit 4 Logic of Social Sciences
Unit 5 Logical or Critical Thinking

Module 2 Understanding Political Inquiry

Unit 1 Analysing Political Inquiry
Unit 2 The Rationale for Political Inquiry
Unit 3 Fundamentals of Political Inquiry
Unit 4 Generalisations
Unit 5 Explanations and Predictions in Political Inquiry

Module 3 The Nexus Between Logic And Political Inquiry

Unit 1 Logic of Political Inquiry

Unit 2 Research Paradigms
Unit 3 Approaches to Political Inquiry
Unit 4 Contemporary Methods of Political Inquiry
Unit 5 Logical Patterns of Explanations

Module 4 Concepts in Political Inquiry

Unit 1 The Meaning of Concepts
Unit 2 Theories in Political Inquiry
Unit 3 Functions of Theories in Political Inquiry
Unit 4 Models in Political Inquiry
Unit 5 Functions of Concepts in Political Inquiry

Module 5 Techniques of Data Generation

Unit 1 Data and Political Inquiry
Unit 2 The Questionnaire Method
Unit 3 The Interview Method
Unit 4 Participant/Observation Method
Unit 5 Documentary/Content Analysis Method

As you can observe, the course begins with the basics and expands into a more elaborate, complex and detailed form. All you need to do is to follow the instructions as provided in each unit. In addition, some self-assessment exercises have been provided with which you can test your progress with the text and determine if your study is fulfilling the stated objectives. Tutor-marked assignments have also been provided to aid your study. All these will assist you to be able to fully grasp knowledge of logic and political inquiry.

TEXTBOOKS AND REFERENCES

At the end of each unit, you will find a list of relevant reference materials which you may yourself wish to consult as the need arises, even though made efforts have been to provide you with the most important information you need to pass this course. However, you are encouraged, as a third year student to cultivate the habit of consulting as many relevant materials as you are able to within the time available to you. In particular, be sure to consult whatever material you are advised to consult before attempting any exercise.

ASSESSMENT

Two types of assessment are involved in the course: the Self-Assessment Exercises (SAEs), and the Tutor-Marked Assessment

(TMA) questions. Your answers to the SAEs are not meant to be submitted, but they are also important since they give you an opportunity to assess your own understanding of the course content. Tutor-Marked Assignments (TMAs) on the other hand are to be carefully answered and kept in your assignment file for submission and marking. This will count for 30% of your total score in the course.

TUTOR-MARKED ASSIGNMENT

At the end of each unit, you will find tutor-marked assignments. There is an average of two tutor-marked assignments per unit. This will allow you to engage the course as robustly as possible. You need to submit at least four assignments of which the three with the highest marks will be recorded as part of your total course grade. This will account for 10 percent each, making a total of 30 percent. When you complete your assignments, send them including your form to your tutor for formal assessment on or before the deadline.

Self-assessment exercises are also provided in each unit. The exercises should help you to evaluate your understanding of the material so far. These are not to be submitted. You will find all answers to these within the units they are intended for.

FINAL EXAMINATION AND GRADING

There will be a final examination at the end of the course. The examination carries a total of 70 percent of the total course grade. The examination will reflect the contents of what you have learnt and the self-assessments and tutor-marked assignments. You therefore need to revise your course materials beforehand.

COURSE MARKING SCHEME

The following table sets out how the actual course marking is broken down.

ASSESMENT	**MARKS**
Four assignments (the best four of all the assignments submitted for marking)	Four assignments, each marked out of 10%, but highest scoring three selected, thus totaling 30%
Final Examination	70%of overall course score
Total	**100% of course score**

COURSE OVERVIEW PRESENTATION SCHEME

Units	**Title of Work**	**Week Activity**	**Assignment (End-of=Unit)**
Course Guide	**Logic and Methods of Political Inquiry**		
Module 1	**Characterizing Logic**		
Unit 1	Meaning and Nature of Logic	Week 1	Assignment 1
Unit 2	History of Logical Laws	Week 2	Assignment 2
Unit 3	Types of Logic	Week3	Assignment 3
Unit 4	Logic of Social Sciences	Week 4	Assignment 4
Unit 5	Logical or Critical Thinking	Week 5	Assignment 5
Module 2	**Understanding Political Inquiry**		
Unit 1	Analyzing Political Inquiry	Week 6	Assignment 1
Unit 2	The Rationale for Political Inquiry	Week 7	Assignment 2
Unit 3	Fundamentals of Political Philosophy	Week 8	Assignment 3
Unit 4	Generalization in Political Inquiry	Week 9	Assignment 4
Unit 5	Explanation and Prediction	Week 10	Assignment 5
Module 3	**The Nexus between Logic and Political Inquiry**		
Unit 1	Logic of Political Inquiry	Week 11	Assignment 1
Unit 2	Research Paradigms	Week 12	Assignment 2
Unit 3	Approaches to Political Inquiry	Week 13	Assignment 3
Unit 4	Contemporary Methods in Political Inquiry	Week 14	Assignment 4
Unit 5	Logical Patterns of Explanations	Week 15	Assignment 5
Module 4	**Concepts in Political Inquiry**		
Unit 1	The Meaning and Nature of Concepts	Week 16	Assignment 1

Unit 2	Theories in Political Inquiry	Week 17	Assignment 2
Unit 3	Function of Theories in Political Inquiry	Week18	Assignment 3
Unit 4	Models in Political Inquiry	Week 19	Assignment 4
Unit 5	Functions of Concepts in Pol. Inquiry	Week 20	Assignment 5
Module 5	**Techniques for Data Generation**		
Unit 1	Data and Political inquiry	Week 21	Assignment 1
Unit 2	The Questionnaire Method	Week 22	Assignment 2
Unit 3	The Interview Method	Week 23	Assignment 3
Unit 4	Participant Observation Method	Week 24	Assignment4
Unit 5	Documentary/Content Analysis Methods	Week 25	Assignment 5

At the end of each unit, you will find tutor-marked assignments. There is an average of two tutor-marked assignments per unit. This will allow you to engage the course as robustly as possible. You need to submit at least four assignments of which the three with the highest marks will be recorded as part of your total course grade. This will account for 10 percent each, making a total of 30 percent. When you complete your assignments, send them including your form to your tutor for formal assessment on or before the deadline.

WHAT YOU WILL NEED IN THE COURSE

This course prepares you on how to carry out your research work especially your project in your 400 Level. It will be helpful if you try to review what you studied earlier. Second, you may need to purchase one or two texts recommended as important for your mastery of the course content. You need quality time in a study friendly environment every week. If you are computer-literate (which ideally you should be), you should be prepared to visit recommended websites. You should also cultivate the habit of visiting reputable physical libraries accessible to you.

FACILITATORS, TUTORS AND TUTORIALS

There are 15 hours of tutorials provided in support of the course. You will be notified of the dates and location of these tutorials, together with the name and phone number of your tutor as soon as you are allocated a

tutorial group. Your tutor will mark and comment on your assignments, and keep a close watch on your progress. Be sure to send in your tutor marked assignments promptly, and feel free to contact your tutor in case of any difficulty with your self-assessment exercise, tutor-marked assignments or the grading of an assignment. In any case, you are advised to attend the tutorials regularly and punctually. Always take a list of such prepared questions to the tutorials and participate actively in the discussions.

ASSESSMENT EXERCISES

There are two aspects to the assessment of this course. First is the Tutor-Marked Assignments; second is a written examination. In handling these assignments, you are expected to apply the information, knowledge and experience acquired during the course. The tutor-marked assignments are now being done online. Ensure that you register all your courses so that you can have easy access to the online assignments. Your score in the online assignments will account for 30 per cent of your total coursework. At the end of the course, you will need to sit for a final examination. This examination will account for the other 70 per cent of your total course mark.

TUTOR-MARKED ASSIGNMENT

Usually, there are four online tutor-marked assignments in this course. Each assignment will be marked over ten percent. The best three (that is the highest three of the 10 marks) will be counted. This implies that the total mark for the best three assignments will constitute 30% of your total course work. You will be able to complete your online assignments successfully from the information and materials contained in your references, reading and study units.

FINAL EXAMINATION AND GRADING

The final examination for POL 312: Logic and Methods of Political Inquiry will be of two hours duration and have a value of 70% of the total course grade. The examination will consist of multiple choice and fill-in-the-gaps questions which will reflect the practice exercises and tutor-marked assignments you have previously encountered. All areas of the course will be assessed. It is important that you use adequate time to revise the entire course. You may find it useful to review your tutor-marked assignments before the examination. The final examination covers information from all aspects of the course.

HOW TO GET THE MOST FROM THIS COURSE

There are 25 units in this course. You are to spend one week in each unit. In distance learning, the study units replace the university lecture. This is one of the great advantages of distance learning; you can read and work through specially designed study materials at your own pace, and at a time and place that suites you best. Think of it as reading the lecture instead of listening to the lecturer. In the same way a lecturer might give you some reading to do. The study units tell you when to read and which are your text materials or recommended books. You are provided exercises to do at appropriate points, just as a lecturer might give you in a class exercise.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the unit, and how a particular unit is integrated with other units and the course as a whole. Next to this is a set of learning objectives. These objectives let you know what you should be able to do, by the time you have completed the unit. These learning objectives are meant to guide your study. The moment a unit is finished, you must go back and check whether you have achieved the objectives. If this is made a habit, then you will significantly improve your chance of passing the course.

The main body of the unit guides you through the required reading from other sources. This will usually be either from your reference or from a reading section.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your tutor or visit the study centre nearest to you. Remember that your tutor's job is to help you. When you need assistance, do not hesitate to call and ask your tutor to provide it.

Read this course guide thoroughly. It is your first assignment.

Organise a study schedule – Design a 'Course Overview' to guide you through the course. Note the time you are expected to spend on each unit and how the assignments relate to the units.

Important information; e.g. details of your tutorials and the date of the first day of the semester is available at the study centre.

You need to gather all the information into one place, such as your diary or a wall calendar. Whatever method you choose to use, you should decide on and write in your own dates and schedule of work for each unit.

Once you have created your own study schedule, do everything to stay faithful to it.

The major reason that students fail is that they get behind in their coursework. If you get into difficulties with your schedule, please let your tutor or course coordinator know before it is too late for help.

Turn to Unit 1, and read the introduction and the objectives for the unit.

Assemble the study materials. You will need your references for the unit you are studying at any point in time.

As you work through the unit, you will know what sources to consult for further information.

Visit your study centre whenever you need up-to-date information.

Well before the relevant online TMA due dates, visit your study centre for relevant information and updates. Keep in mind that you will learn a lot by doing the assignment carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination.

Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor. When you are confident that you have achieved a unit's objectives, you can start on the next unit. Proceed unit by unit through the course and try to space your study so that you can keep yourself on schedule.

After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives (listed in the course guide).

CONCLUSION

This is a practical course so you will get the best out of it if you cultivate the habit of relating it to the practice of political research and investigation as you progress in your studies.

SUMMARY

Logic and Methods of Political Inquiry introduces you to general logical political research and the intricacies of research methodology in social sciences generally and political science in particular. All the basic course materials that you need to successfully complete the course are provided. By the end, you will be able to:

- explain concepts in political research;
- discuss methodological sequence in political science inquiry;
- have an understanding of the importance of scientific research to political science and;
- be familiar with the major concepts in political inquiry such as theories, models, data collection and analysis.

LIST OF ACRONYMS

POL – POLITICAL SCIENCE
SC – SCIENCES
SOC -- SOCIAL SCIENCES
SDL --- STANDARD DEONTIC LOGIC
DP - DUTY PARADOX
ANOVA— ANALYSIS OF VARIANCE
MANOVA---MULTIVARIATE ANALYSIS OF VARIANCE
COVARIANCE FDG----FOCUS DISCUSSION GROUP
IDI---IN-DEPT INTERVIEW
KII ---KEY INFORMANT INTERVIEW

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MAIN COURSE

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MODULE 1 CHARACTERISING LOGIC

INTRODUCTION

This module provides an overview of the logic of methodological issues relating to the study of political inquiry. The module examines logic, approaches and methods that underpin the study of political inquiry. This module examines the methods of political investigation, defines and explains the meaning of logic, characterises logic, identifies and x-rays the branches of logic, and highlights the essence of logical political inquiry. The module is structured into five units comprising of; meaning, nature, types, branches, and importance of logic in political inquiry.

Unit 1 Meaning and Nature of Logic
Unit 2 History of Logic
Unit 3 Types of Logic
Unit 4 Logic of Social Sciences
Unit 5 Logical or Critical Thinking

UNIT 1 MEANING AND NATURE OF LOGIC

CONTENTS

1.0 INTRODUCTION

This unit introduces you to the definition and nature of logic. It explains the various meanings of the term logic and the complexity in the conceptualisation of the term logic. It analyses and gave a working definition for the purpose of this course. The unit explains the characteristics of *logic* and the link between logic and argument.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- discuss the term *logic* and identify the characteristics of logic
- explain the link between argument and logic.

3.0 MAIN CONTENT

3.1 Defining Logic

The term "logic" came from the Greek word logos, which is sometimes translated as "sentence", "discourse", "reason", "rule", and "ratio". Of course, these translations are to help us understand the more specialized meaning of "logic" as it is used in this course. Briefly speaking, we might define logic as the study of the principles of correct reasoning. This is a rough definition, because how logic should be properly defined is actually quite a controversial matter.

This because there is no universal agreement as to the exact definition and boundaries of logic, and this is why the issue still remains one of the main subjects of research and debates. Notwithstanding, it has traditionally included the classification of arguments, the systematic exposition of the logical forms, the validity and soundness of deductive reasoning, the strength of inductive reasoning, the study of formal proofs and inference (including paradoxes and fallacies), and the study of syntax and semantics. Logic is the systematic study of the forms of inference, the relations that lead to the acceptance of one proposition, on the basis of a set of other propositions, the premises. More broadly, logic is the analysis and appraisal of inquiries. Completeness, consistency, decidability, and expressivity, are further fundamental concepts in logic. The categorisation of the logical systems and of their properties has led to the emergence of a met theory of logic known as *metalogic*.

3.2 Characteristics of Logic

Informal logic is the study of natural language arguments. The study of fallacies is an important branch of informal logic. Since much informal argument is not strictly speaking deductive, on some conceptions of logic, informal logic is not logic at all.

Formal logic is the study of inference with purely formal content. An inference possesses a purely formal content if it can be expressed as a particular application of a wholly abstract rule, that is, a rule that is not

about any particular thing or property. Traditional syllogistic logic, also known as term logic, and modern symbolic logic, the study of symbolic abstractions that capture the formal features of logical inference, are examples of formal logic. Symbolic logic is often divided into two main branches: propositional logic and predicate logic. The works of Aristotle contain the earliest known formal study of the syllogism. Modern formal logic follows and expands on Aristotle. In many definitions of logic, logical inference and inference with purely formal content are the same. This does not render the notion of informal logic vacuous, because no formal logic captures all of the nuances of natural language.

Logic is generally considered formal when it analyses and represents the form of any valid argument type. The form of an argument is displayed by representing its sentences in the formal grammar and symbolism of a logical language to make its content usable in formal inference. Simply put, to formalise simply means to translate English sentences into the language of logic. This is called showing the logical form of the argument. This is necessary because indicative sentences of ordinary language show a considerable variety of form and complexity that makes their use in inference impractical. It requires, first, ignoring those grammatical features irrelevant to logic replacing conjunctions irrelevant to logic with logical conjunctions and replacing ambiguous, or alternative logical expressions with expressions of a standard type. The importance of form was recognised from ancient times. Aristotle uses variable letters to represent valid inferences. There is a big difference between the kinds of formulas seen in traditional term logic and the predicate calculus that is the fundamental advance of modern logic. The formula A(P,Q) (all Ps are Qs) of traditional logic corresponds to the more complex formula in predicate logic, involving the logical connectives for universal quantification and implication rather than just the predicate letter A and using variable arguments where traditional logic uses just the term letter P. With the complexity come power, and the advent of the predicate calculus inaugurated revolutionary growth of the subject.

3.3 Argument in Logic

Logic arose from a concern with correctness of argumentation. Modern logicians usually wish to ensure that logic studies just those arguments that arise from appropriately general forms of inference. For example, Thomas Hobbes writes in the Stanford Encyclopedia of Philosophy that logic "does not, however, cover good reasoning as a whole. That is the job of the theory of rationality. Rather it deals with inferences whose validity can be traced back to the formal features of the representations that are involved in that inference, be they linguistic, mental, or other representations."

The idea that logic treats special forms of argument, deductive argument, rather than argument in general, has a history in logic that dates back at least to *logicism* in mathematics (19th and 20th centuries) and the advent of the influence of mathematical logic on philosophy. A consequence of taking logic to treat special kinds of argument is that it leads to identification of special kinds of truth, the logical truths (with logic equivalently being the study of logical truth), and excludes many of the original objects of study of logic that are treated as informal logic. Robert Brandom has argued against the idea that logic is the study of a special kind of logical truth, arguing that instead one can talk of the logic of material inference (in the terminology of Wilfred Sellars), with logic making explicit the commitments that were originally implicit in informal inference.

A good argument not only possesses validity and soundness (or strength, in induction), but it also avoids circular dependencies, it's clearly stated, relevant, and consistent; otherwise it's useless for reasoning and persuasion, and is classified as a fallacy. In ordinary discourse, inferences may be signified by words such as therefore, thus, hence, ergo, and so on.

The concepts of logical form and argument are central to logic. An argument is constructed by applying one of the forms of the different types of logical reasoning: deductive, inductive, and adductive. In deduction, the validity of an argument is determined solely by its logical form, not its content, while the soundness requires both validity and that all the given premises are actually true.

SELF-ASSESSMENT EXERCISE

Differentiate between logic and argument.

4.0 CONCLUSION

It is expected that after reading this unit, students should be able to define and explain the meaning and nature of logic. Explain the link between argument and logic.

5.0 SUMMARY

In this unit, we have explained the meaning of logic, the relationship between logic and argument and the types of argument and the characteristics of logic in inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain what you understand by logic.
2. List the characteristics of logic you have studied.
3. Differentiate between argument and logic.

7.0 REFERENCES/FURTHER READING

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UNIT 2 HISTORY OF LOGIC

CONTENTS

1.0 INTRODUCTION

This unit introduces you to the developmental stages of logic in the course of study. It goes further to explain how the Aristotle's system of logic was responsible for the introduction of hypothetical syllogism stance of symbolic logic. This will offer you a clearer understanding of the stance of *semantics* of logic while carrying out any inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain developmental stages of logic
- discuss the semantics of logic

3.0 MAIN CONTENT

3.1 History of Logic

Explain developmental stages of logic

Discuss the semantics of logic

Logic comes from the Greek word *logos*, originally meaning "the word" or "what is spoken", but coming to mean "thought" or "reason". In the Western World, logic was first developed by Aristotle, who called the subject 'analytics'. Aristotelian logic became widely accepted in science and mathematics and remained in wide use in the West until the early 19th century. Aristotle's system of logic was responsible for the introduction of hypothetical syllogism, temporal modal logic and

inductive logic as well as influential vocabulary as such terms- *predicables*, *syllogisms* and *propositions*. There was also the rival Stoic logic.

In Europe during the later medieval period, major efforts were made to show that Aristotle's ideas were compatible with Christian faith. During the High Middle Ages, logic became a main focus of philosophers, who would engage in critical logical analyses of philosophical arguments, often using variations of the methodology of scholasticism. The syllogistic logic developed by Aristotle predominated in the West until the mid-19th century, when interest in the foundations of mathematics stimulated the development of symbolic logic (now called mathematical logic).

The development of logic since Frege, Russell, and Wittgenstein had a profound influence on the practice of philosophy and the perceived nature of philosophical problems (see analytic philosophy) and philosophy of mathematics. Logic, especially sentential logic, is implemented in computer logic circuits and is fundamental to computer science. Logic is commonly taught by university philosophy, sociology, advertising and literature departments, often as a compulsory discipline.

3.2 Semantics of Logic

The validity of an argument depends upon the meaning or semantics of the sentences that make it up. Aristotle's Organon, especially *De Interpretatione*, gives a cursory outline of semantics which the scholastic logicians, particularly in the thirteenth and fourteenth century, developed into a complex and sophisticated theory, called Supposition theory. This showed how the truth of simple sentences, expressed schematically, depend on how the terms 'supposit' or *stand for* certain extra-linguistic items. For example, in part II of his Summa Logicae, William of Ockham presents a comprehensive account of the necessary and sufficient conditions for the truth of simple sentences, in order to show which arguments are valid and which are not. Thus "every A is B' is true if and only if there is something for which 'A' stands, and there is nothing for which 'A' stands, for which 'B' does not also stand."

Early modern logic defined semantics purely as a relation between ideas. Antoine Arnauld in the *Port Royal-Logic*, says that 'after conceiving things by our ideas, we compare these ideas, and, finding that some belong together and some do not, we unite or separate them. This is called *affirming* or *denying*, and in general *judging*. Thus truth and falsity are no more than the agreement or disagreement of ideas. This suggests obvious difficulties, leading Locke to distinguish between

'real' truths, when our ideas have 'real existence' and 'imaginary' or 'verbal' truth; where ideas like harpies or centaurs exist only in the mind.

Modern semantics is in some ways closer to the medieval view, in rejecting such psychological truth-conditions. However, the introduction of quantification, needed to solve the problem of multiple generality, rendered impossible the kind of subject-predicate analysis that underlies medieval semantics. The main modern approach is *model-theoretic semantics*, based on semantic theory of truth. The approach assumes that the meaning of the various parts of the propositions are given by the possible ways we can give a recursively specified group of interpretation functions from them to some predefined domain of discourse; an interpretation of first-order predicate logic is given by a mapping from terms to a universe of individuals, and a mapping from propositions to the truth values "true" and "false".

Model-theoretic semantics is one of the fundamental concepts of model theory. Modern semantics also admits rival approaches, such as the proof-theoretic semantics that associates the meaning of propositions with the roles that they can play in inferences, an approach that ultimately derives from the structural proof theory.

3.3 Logic and Rationality

As the study of argument is of clear importance to the reasons that we hold things to be true, logic is of essential importance to rationality. Here we have defined logic to be "the systematic study of the form of arguments"; the reasoning behind argument is of several sorts, but only some of these arguments fall under the aegis of logic proper.

Deductive reasoning concerns the logical consequence of given premises and is the form of reasoning most closely connected to logic. However, on a narrow conception, logic concerns just deductive reasoning; although such a narrow conception controversially excludes most of what is called informal logic.

There are other forms of reasoning that are *rational* but that are generally not taken to be part of logic. These include inductive reasoning, which covers forms of inference that move from collections of particular judgments to universal judgments, and adductive reasoning, which is a form of inference that goes from observation to a hypothesis that accounts for the reliable data (observation) and seeks to explain relevant evidence. Thus, to adduce a hypothetical explanation from an observed surprising circumstance is to surmise that may be true because then would be a matter of course. Thus, to adduce from involves

determining that is sufficient (or nearly sufficient), but not necessary.

While inductive and adductive inferences are not part of logic proper, the methodology of logic has been applied to them with some degree of success. For example, the notion of deductive validity (where an inference is deductively valid if and only if there is no possible situation in which all the premises are true but the conclusion false) exists in an analogy to the notion of inductive validity, or "strength", where an inference is inductively strong if and only if its premises give some degree of probability to its conclusion. Whereas the notion of deductive validity can be rigorously stated for systems of formal logic in terms of the well-understood notions of semantics, inductive validity requires us to define a reliable generalisation of some set of observations. The task of providing this definition may be approached in various ways, some less formal than others; some of these definitions may use logical association rule induction, while others may use mathematical models of probability such as decision trees.

SELF-ASSESSMENT EXERCISE

What do you understand by rational reasoning?

4.0 CONCLUSION

It is expected that after reading this unit, students should be able to understand developmental stages of logic the relevance of semantics of logic to the history of logic, Political Science and logical laws of scientific research and reasoning and relate logic and rationality to political inquiry.

5.0 SUMMARY

In this unit, we have traced the journey of logic, the relationship between the history of logic and semantics of logic. The unit also discussed logic and rationality in details.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe history of logic.
2. Discuss the developmental stages.
3. What do you understand by semantics of logic?

7.0 REFERENCES/FURTHER READING

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UNIT 3 TYPES OF LOGIC

CONTENTS

1.0 INTRODUCTION

There are many types of logic. This unit introduces students to the various types of logic available. Each of the type of logic has its own peculiarities that make logic very reliant to any meaningful political inquiry that can produce a reliable result for general acceptance for generating social guide. Branches of the types of logic is also identified and discussed in detail.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- identify and explain basic types of logic in details
- relate branches of logic to their understanding of logical thinking.

3.0 MAIN CONTENT

3.1 Propositional Logic

A propositional calculus or logic (also a sentential calculus) is a formal system in which formulae representing propositions can be formed by combining atomic propositions using logical connectives, and in which a system of formal proof rules establishes certain formulae as "theorems". An example of a theorem of propositional logic is, which says that if A holds, then B implies A.

3.2 Predicate Logic and Modal Logic

Predicate logic is the generic term for symbolic formal systems such as first-order logic, second-order logic, many-sorted logic, and infinitely logic. It provides an account of quantifiers general enough to express a wide set of arguments.

Whilst Aristotelian syllogistic logic specifies a small number of forms that the relevant part of the involved judgments may take, predicate logic allows sentences to be analysed into subject and argument in several additional ways—allowing predicate logic to solve the problem of multiple generality that had perplexed medieval logicians.

The analytical generality of predicate logic provides the foundation of modern mathematical logic. In languages, modality deals with the phenomenon that sub-parts of a sentence may have their semantics modified by special verbs or modal particles. More abstractly, modality affects the circumstances in which an assertion is taken to be satisfied. Confusing modality is known as the modal fallacy. Aristotle's logic is in large parts concerned with the theory of non-modalised logic. The earliest formal system of modal logic was developed by Avicenna.

The *theory of frame semantics*, revolutionised the formal technology available to modal logicians and gave a new graph-theoretic way of looking at modality that has driven many applications in computational linguistics and computer science, such as dynamic logic.

3.3 Mathematical Logic

Mathematical logic is an extension of symbolic logic into other areas, in particular to the study of model theory, proof theory, set theory, and computability theory. Mathematical logic comprises two distinct areas of research; the first is the application of the techniques of formal logic to mathematics and mathematical reasoning, and the second, in the other direction, the application of mathematical techniques to the representation and analysis of formal logic. The earliest use of mathematics and geometry in relation to logic and philosophy goes back to the ancient Greeks such as Euclid, Plato, and Aristotle. Many other ancient and medieval philosophers applied mathematical ideas and methods to their philosophical claims.

One of the boldest attempts to apply logic to mathematics was the logicism pioneered by philosopher-logicians. Mathematical theories were supposed to be logical tautologies, and the programme was to show this by means of a reduction of mathematics to logic. Recursion

theory captures the idea of computation in logical and arithmetic terms. Today recursion theory is mostly concerned with the more refined problem of complexity classes—when is a problem efficiently solvable?—and the classification of degrees of insolvability.

3.4 Philosophical Logic

Philosophical logic deals with formal descriptions of ordinary, non-specialist ("natural") language, that is strictly only about the arguments within philosophy's other branches. Most philosophers assume that the bulk of everyday reasoning can be captured in logic if a method or methods to translate ordinary language into that logic can be found. Philosophical logic is essentially a continuation of the traditional discipline called "logic" before the invention of mathematical logic. Philosophical logic has a much greater concern with the connection between natural language and logic. As a result, philosophical logicians have contributed a great deal to the development of non-standard logics (e.g. free logics, tense logics) as well as various extensions of classical logic (e.g. modal logics) and non-standard semantics for such logics.

Logic and the philosophy of language are closely related. Philosophy of language has to do with the study of how our language engages and interacts with our thinking. Logic has an immediate impact on other areas of study. Studying logic and the relationship between logic and ordinary speech can help a person better structure his own arguments and critique the arguments of others. Many popular arguments are filled with errors because so many people are untrained in logic and unaware of how to formulate an argument correctly.

3.5 Computational Logic

A simple toggling circuit is expressed using a logic gate and a synchronous register. Logic cut to the heart of computer science as it emerged as a discipline. The general purpose computer was of fundamental importance to the designers of the computer machinery in the 1940s.

In the 1950s and 1960s, researchers predicted that when human knowledge could be expressed using logic with mathematical notation, it would be possible to create a machine that mimics the problem-solving skills of a human being. This was more difficult than expected because of the complexity of human reasoning.

In logic programming, a program consists of a set of axioms and rules. Logic programming systems such as Prolog compute the consequences

of the axioms and rules in order to answer a query. Today, logic is extensively applied in the field of artificial intelligence, and this field provides a rich source of problems in formal and informal logic. Argumentation theory is one good example of how logic is being applied to artificial intelligence.

3.6 Informal Logic, Dialectic and Argumentation Theory

The motivation for the study of logic was to distinguish good arguments from bad arguments. Typically dialectical logic forms the heart of critical thinking. Dialectic has been linked to logic since ancient times and now as an attempt to provide mathematical foundations for logic and dialectic by formalising dialectical logic. Dialectical logic is also the name given to the special treatment of dialectic in Hegelian and Marxist thought.

There have been pre-formal treatises on argument and dialectic. Theories of defensible reasoning can provide a foundation for the formalisation of dialectical logic and dialectic itself can be formalised as moves in a game, where an advocate for the truth of a proposition and an opponent argue. Such games can provide a formal game semantics for many logics. Argumentation theory is the study and research of informal logic, fallacies, and critical questions as they relate to every day and practical situations. Specific types of dialogue can be analysed and questioned to reveal premises, conclusions, and fallacies. Argumentation theory is now applied in social sciences; artificial intelligence; and law.

3.7 Rejection of Logical Truth

The philosophical vein of various kinds of skepticism contains many kinds of doubt and rejection of the various bases on which logic rests, such as the idea of logical form, correct inference, or meaning, typically leading to the conclusion that there are no logical truths. Thus, agreement on what logic actually is has remained elusive. This is in contrast with the usual views in philosophical skepticism, where logic directs skeptical enquiry to doubt received wisdoms.

There are many reasons using formal logic. One is that formal logic helps us identify patterns of good reasoning and patterns of bad reasoning, so we know which to follow and which to avoid. This is why studying basic formal logic can help improve critical thinking. Formal systems of logic are also used by linguists to study natural languages. Computer scientists also employ formal systems of logic in research relating to Artificial Intelligence. Finally, many scholars also like to use

logic when dealing with complicated problems, in order to make their reasoning more explicit and precise.

SELF -ASSESSMENT EXERCISE

Discuss Philosophical logic.

4.0 CONCLUSION

After reading this unit, students should be able to identify and explain types of logic and explain their relationship to one another. They should also be able to explain the characteristics of each type in relation to the link of logic and inquiry.

5.0 SUMMARY

In this unit, explanations were made on the types of logic and their relationship with one another. The unit also explained in detail the nature of each of the branches.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss your understanding of computational logic
2. Explain the relevance of informal logic and dialectic.
3. Differentiate between mathematical logic and modal logic.

7.0 REFERENCES/FURTHER READING

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UNIT 4 THE LOGIC OF SOCIAL SCIENCES

CONTENTS

1.0 INTRODUCTION

This unit introduces you to the relationship between logic and Social Sciences. It explains the attributes of Social Sciences and the necessity of applying logical thinking to social and political inquiry. It analyses the philosophy of Social Sciences and its relationship with Natural Sciences. It also explains the connectivity between philosophy, natural and social sciences.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- discuss the philosophy of social sciences
- explain various positions and methods advocated by scholars on socio-political investigation.

3.0 MAIN CONTENT

3.1 Logic and Social Sciences

The philosophy of Social Science, like the philosophy of natural science, has both *descriptive* and *prescriptive* sides. On the one hand, the field is about the social sciences, the explanations, methods, empirical arguments, theories, hypotheses, etc. that actually occurs in the social science literature, past and present. This means that the philosopher needs to have extensive knowledge of several areas of social science research, in order to be able to formulate an analysis of the social sciences that corresponds appropriately to scientists' practice. On the

other hand, the field is epistemic. It is concerned with the idea that scientific theories and hypotheses are put forward as true or probable, and are justified on rational grounds (empirical and theoretical). The philosopher therefore wants to be able to provide a critical evaluation of existing social science methods insofar as these methods are found to be less truth enhancing than they might be.

These two aspects of the philosophical enterprise suggest that philosophy of social science should be construed as a rational reconstruction of existing social science practice—a reconstruction that is guided by existing practice but that goes beyond that practice by identifying faulty assumptions, forms of reasoning, or explanatory frameworks. Philosophers have disagreed over the relation between the social and natural sciences.

One position is naturalism according to which the methods of the social sciences should correspond closely to those of the natural sciences. This position is closely related to *physicalism* the doctrine that all higher-level phenomena and regularities--including social phenomena--must be ultimately reducible to physical entities and the laws, which govern them. On the other side is the view that the social sciences are inherently distinct from the natural sciences.

This perspective holds that social phenomena are metaphysically distinguishable from natural phenomena because they are intentional-they depend on the meaningful actions of individuals. On this view, natural phenomena admit of causal explanation, whereas social phenomena require intentional explanation. The anti-naturalist position also maintains that there is a corresponding difference between the methods appropriate to natural and social science.

One important school the *verstehen method* within philosophy holds that there is a method of intuitive interpretation of human action, which is radically distinct from methods of inquiry in the natural sciences. Social science takes its origin in this fact of the meaningfulness of human action.

3.2 Interpretive Sociology

Interpretive Sociology maintains that the goal of social inquiry is to provide interpretations of human conduct within the context of culturally specific meaningful arrangements. This approach draws an analogy between literary texts and social phenomena: both are complex systems of meaningful elements, and the goal of the interpreter is to provide an interpretation of the elements that makes sense of them.

Thus, Social Science involves a *hermeneutic* inquiry which requires that the interpreter should tease out the meanings underlying a particular complex of social behaviour, much as a literary critic pieces together an interpretation of the meaning of a complex literary text.

Interpretive sociologists often take the meaningfulness of social phenomena to imply that social phenomena do not admit of causal explanation However, it is possible to accept the idea that social phenomena derive from the purposive actions of individuals, without relinquishing the goal of providing causal explanations of social phenomena. For it is necessary to distinguish between the general idea of a causal relation between two circumstances and the more specific idea of "causal determination through strict laws of nature." It is certainly true that social phenomena rarely derive from strict laws of nature; wars do not result from antecedent political tensions in the way that earthquakes result from antecedent conditions in plate tectonics.

However, when we admit the possibility of non-deterministic causal relations deriving from the choices of individual persons, it is evident that social phenomena admit of causal explanation and in fact, much social explanation depends on asserting causal relations between social events and processes.

3.4 Methodological Individualism

This is the position that asserts the *primacy* of facts about individuals over facts about social entities. This doctrine takes three forms: a claim about social entities, a claim about social concepts, and a claim about social regularities. The first version maintains that social entities must be reducible to ensembles of individuals-- as an insurance company might be reduced to the ensemble of employees, supervisors, managers, and owners whose actions constitute the company. Likewise, it is sometimes held that social concepts must be reducible to concepts involving only individuals--for example, the concept of a social class might be defined in terms of concepts pertaining only to individuals and their behaviour. Finally, it is sometimes held that social regularities must be derivable from regularities of individual behaviour.

There are several positions opposed to methodological individualism. At the extreme, there is methodological holism--the doctrine that holds that social entities and facts are autonomous and irreducible. And there is a position intermediate between these two that holds that every social explanation require micro-foundations--an account of the circumstances at the individual level that lead individuals to behave in such ways as to bring about the observed social regularities. If we observe that an

industrial strike is successful over an extended period, it is not sufficient to explain this circumstance by referring to the common interest that members of the union have in winning their demands. Rather, we need to have information about the circumstances of the individual union member that induces him or her to contribute to this public good.

A fruitful research framework in the social sciences is the idea that men and women are rational, so it is possible to explain their behaviour as the outcome of a deliberation about means of achieving their individual ends. This fact in turn gives rise to a set of regularities about individual behaviour that may be used as a ground for social explanation. We may explain some complex social phenomenon as the aggregate result of the actions of a large number of individual agents with a hypothesised set of goals within a structured environment of choice.

SELF- ASSESSMENT EXERCISE

Critically examine the relationship between logic and social sciences.

4.0 CONCLUSION

After reading this unit, students should be able to identify the various schools of thought in the explanation of the relationship between logic and social sciences and between social sciences and natural sciences.

5.0 SUMMARY

In this unit, we have explained the various schools of thought that explain the relationship between logic and social sciences on the one hand, social sciences and natural sciences on the other hand. We have also highlighted the various explanations used by social scientists to analyse human behaviour and attitudes.

6.0 TUTOR-MARKED ASSIGNMENT

1. Identify the schools of thought in the explanation of social relationship
2. Discuss your understanding of Interpretive Sociology
3. What do you understand by Methodological individualism?

7.0 REFERENCES/FURTHER READING

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UNIT 5 LOGICAL OR CRITITCAL THINKING

CONTENTS

1.0 INTRODUCTION

This unit explains the usefulness of logical thinking to political inquiry. It examines the usefulness of assumptions in the understanding of social phenomena by identifying the hidden values of facts, and evaluating evidences and assessing conclusions. It explains the ability to understand and find workable solutions to a complex political problem.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain the term critical thinking
- discuss the usefulness of critical thinking to political inquiry.

3.0 MAIN CONTENT

3.1 Logical Thinking and Political Inquiry

Logical or *critical thinking* clarifies goals, examines assumptions, discerns hidden values, evaluates evidence, accomplishes actions, and assesses conclusions. "Critical" as used in the expression "critical thinking" connotes the importance or centrality of thinking to an issue, question or problem of concern. "Critical" in this context does not mean "disapproval" or "negative." There are many positive and useful uses of critical thinking, for example formulating a workable solution to a complex personal problem, deliberating as a group about what course of action to take, or analysing the assumptions and the quality of the methods used in scientifically arriving at a reasonable level of confidence about a given hypothesis. Using strong critical thinking we

might evaluate an argument, for example, as worthy of acceptance because it is valid and based on true premises.

Critical thinking can occur whenever one judges, decides, or solves a problem; in general, whenever one must figure out what to believe or what to do, and do so in a reasonable and reflective way. Reading, writing, speaking, and listening can all be done critically or uncritically. Critical thinking is crucial to becoming a close reader and a substantive writer. Expressed most generally, critical thinking is "a way of taking up the problems of life."

"Fluid intelligence" directly correlates with critical thinking skills. You are able to determine patterns, make connections and solve new problems. When you improve your critical thinking skills, you also improve your fluid intelligence, which also helps increase your problem solving skills and deep thinking elements. All of these skills relate to one part of the brain, and the more you use them the easier it will be to put your skills to the test.

The list of core critical thinking skills includes observation, interpretation, analysis, inference, evaluation, explanation and meta-cognition. There is a reasonable level of consensus among experts that an individual or group engaged in strong critical thinking gives due consideration to the following; Evidence through observation; Context of judgment; Relevant criteria for making the judgment well; Applicable methods or techniques for forming the judgment; Applicable theoretical constructs for understanding the problem and the question at hand.

In addition to possessing strong critical thinking skills, one must be disposed to engage problems and decisions using those skills. Critical thinking employs not only logic but broad intellectual criteria such as clarity, credibility, accuracy, precision, relevance, depth, breadth, significance and fairness. Critical thinking calls for the ability to: Recognise problems, to find workable means for meeting those problems; Understands the importance of prioritisation and order of precedence in problem solving; Gather and marshal pertinent (relevant) information; Recognise unstated assumptions and values; Comprehend and use language with accuracy, clarity, and discrimination; Interpret data, to appraise evidence and evaluate arguments; Recognise the existence (or non-existence) of logical relationships between propositions; Draw warranted conclusions and generalisations; Put to test the conclusions and generalisations at which one arrives; Reconstruct one's patterns of beliefs on the basis of wider experience and; Render accurate judgments about specific things and qualities in everyday life.

Irrespective of the sphere of thought, "a well cultivated critical thinker": raises important questions and problems, formulating them clearly and precisely; gathers and assesses relevant information, using abstract ideas to interpret it effectively; comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards; thinks open-mindedly within alternative systems of thought, recognising and assessing, as need be, their assumptions, implications, and practical consequences; and communicates effectively with others in figuring out solutions to complex problems; without being unduly influenced by others' thinking on the topic.

Critical thinking is about being both willing and able to evaluate one's thinking. Thinking might be criticised because one does not have all the relevant information – indeed, important information may remain undiscovered, or the information may not even be knowable – or because one makes unjustified inferences, uses inappropriate concepts, or fails to notice important implications. One's thinking may be unclear, inaccurate, imprecise, irrelevant, narrow, shallow, illogical, or trivial, due to ignorance or misapplication of the appropriate skills of thinking. On the other hand, one's thinking might be criticised as being the result of a sub-optimal disposition.

3.2 Character of Critical Thinkers

The dispositional dimension of critical thinking is logical character. Its focus is in developing the habitual intention to be truth-seeking, open-minded, systematic, analytical, inquisitive, confident in reasoning, and prudent in making judgments. Those who are ambivalent on one or more of these aspects of the disposition toward critical thinking, or who have an opposite disposition (intellectually arrogant, biased, intolerant, disorganised, lazy, heedless of heedless of consequences, indifferent toward new information, mistrustful of reasoning, or imprudent) are more likely to encounter problems in using their critical thinking skills. Failure to recognise the importance of correct dispositions can lead to various forms of self-deception and closed-mindedness, both individually and collectively.

In reflective problem solving and thoughtful decision making, using critical thinking one considers evidence like investigating evidence, the context of judgment, the relevant criteria for making the judgment well, the applicable methods or techniques for forming the judgment, and the applicable theoretical constructs for understanding the problem and the question at hand. The deliberation characteristic of strong critical thinking associates critical thinking with the reflective aspect of human reasoning. Those who would seek to improve our individual and

collective capacity to engage problems using strong critical thinking skills are recommending that we bring greater reflection and deliberation to decision making.

Critical thinking is based on self-corrective concepts and principles, not on hard and fast, or systematic, procedures. Critical thinking employs not only logic (either formal or, much more often, informal) but broad intellectual criteria such as clarity, credibility, accuracy, precision, relevance, depth, breadth, significance and fairness.

The positive habits of mind which characterise a person strongly disposed toward critical thinking include a courageous desire to follow reason and evidence wherever they may lead, open-mindedness, foresight attention to the possible consequences of choices, a systematic approach to problem solving, inquisitiveness, fair-mindedness, maturity of judgment, and confidence in reasoning.

3.3 The Concepts and Principles of Critical Thinking

The concepts and principles of critical thinking can be applied to any context or case but only by reflecting upon the nature of that application. Critical thinking forms, a system of related, and overlapping, modes of thought such as anthropological thinking, sociological thinking, historical thinking, political thinking, psychological thinking, philosophical thinking, mathematical thinking, chemical thinking, biological thinking, ecological thinking, legal thinking, ethical thinking, musical thinking, thinking like a painter, sculptor, engineer, businessperson, etc. In other words, though critical thinking principles are universal, their application to disciplines requires a process of reflective contextualisation.

Critical thinking is considered important in the academic fields because it enables one to analyse, evaluate, explain, and restructure their thinking, thereby decreasing the risk of adopting, acting on, or thinking with, a false belief. However, even with knowledge of the methods of logical inquiry and reasoning, mistakes can happen due to a thinker's inability to apply the methods or because of character traits such being *ego-centric*.

Critical thinking includes identification of prejudice, bias, propaganda, self-deception, distortion, misinformation, etc. Given research in cognitive psychology, some educators believe that schools should focus on teaching their students critical thinking skills and cultivation of intellectual traits.

SELF-ASSESSMENT EXERCISE

Assess the relevance of critical thinking to political inquiry

4.0 CONCLUSION

After reading through this unit, students should be able to understand the meaning of logical or critical thinking, its relationship with political inquiry and the features or characteristics of a critical thinker.

4.0 SUMMARY

In this unit, we have explained the meaning of logical or critical thinking and its relationship with political inquiry. Also, we have explained the features of a critical thinker and the expected role of a critical thinker in solving socio-political problems in his or her society.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain what you understand by logical or critical thinking
2. Identify and explain the concepts of critical thinking.
4. Analyse the instruments used in critical thinking

7.0 REFERENCES/FURTHER READING

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MODULE 2 UNDERSTANDING POLITICAL INQUIRY

INTRODUCTION

Module one in this course introduce the meaning and nature of logic; branches of logic; argument and types of argument; differentiated logic and argument showing the importance of the concepts and their contribution to credible political inquiry. This is very important because without a good understanding of the meaning, character, and nature of logic one may not be able to properly link logic and political inquiry and apply the identified nexus to have a robust understanding of scientific research method in political science. This module 2 will dwell on political inquiry defining and characterising political inquiry. The module is divided into five units to examine meaning and nature of political inquiry, methods and scientific inquiry in an inter-depended form.

Unit 1 Analysing Political Inquiry
Unit 2 The Rationale for Political Inquiry
Unit 3 Fundamentals of Political Inquiry
Unit 4 Generalisations
Unit 5 Explanations and Predictions in Political Inquiry

UNIT1 ANALYZING POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the meaning of political inquiry and the techniques involved in carrying out political investigation. It further explains the views of scholars on the revolutionary shift in the approaches to the study of political inquiry. It analyses the movement from the traditional approach to the behavioural or scientific approach.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain the traditional approach to the study of politics
- discuss the opinions of political scientists on the paradigmatic shift.

3.0 MAIN CONTENT

3.1 Traditional Political Inquiry

Since the beginning of recorded history, people have observed, thought about, evaluated, and analysed politics. Those who have analysed politics on a fairly regular and systematic basis are called political philosophers; they include such well-known figures as Plato, Aristotle, Locke, and Rousseau. The product of their analyses can be regarded as traditional political philosophy or traditional political theory. But there is a more precise and fruitful way of characterising traditional political philosophy, which involves sorting out its main activities and indicating which of these activities of political philosophers have spent most of their time on. Each activity is really a type of analysis. In the same manner, it is possible to discern political inquiry in this manner. Traditional political inquiry also is possible to discern political inquiry in this manner. Traditional political inquiry also suggests that certain orientations in political investigation are carried out in this traditional manner.

Analysis is a word that has a variety of meanings. To chemists, “analysis”, means breaking things down into their constituent parts; to biologists, it means sorting things into categories; to mathematicians, it means deriving conclusions from premises; to social scientists, it means identifying the causes of various kinds of human behavior; to moral philosophers, it means showing which actions are good and which ones are bad.

What all of these activities have in common is the attempt to answer one kind of question or another. Thus, “to analyse,” something means to ask a question, give an answer after thorough investigation, and then give reasons for the answer. In conducting political inquiry, the answers to these questions can only be provided after certain investigations must have been carried out. This may take different methods, which constitute the subject matter of this course.

3.2 Forms of Political Philosophy Analysis

Under political philosophy analysis, there are four activities of conducting political inquiry, each of a type of analysis that political philosophers have engaged in have been labeled *scientific*, *normative*, *instrumental* and *analytical* (also called logical).

Describing a political system, an aspect of it, or a general political phenomenon, and explaining or accounting for such facts are scientific inquiry. The primary activities of political philosophers have probably been normative. These are activities, which involve moral, ethical, or value judgments. While scientific activities deal with what is, value judgments express what a political philosopher believes ought to be. There are several varieties of normative activity. First, many political philosophers spend much time prescribing the best state or political system. However, this is not to say that traditional political philosophers have not engaged in scientific activity. Traditional political philosophers have always been engaged in such scientific activities the political philosopher has rarely been a very good scientist, especially when it comes to explaining political phenomena.

This is probably attributable to several factors. First, and largely beyond his control, was the lack of sophisticated scientific and methodological technology and hardware. The statistical and mathematical tools so essential to modern social scientists were not available. Secondly, is the fact that scientific activities have never been the main concern of the political philosopher. The third nature of political inquiry can be found in the instrumental or applied value judgment, which is often confused with normative statements. There is a fundamental difference in that instrumental judgments recommend the best way of achieving a given end, but they do not attempt to justify the end itself. This is the significance of an alternate label, means-ends analysis.

The last kind of activity in political inquiry is the analytic or logical activity. This category includes both the analysis of political words and concepts and the examination of certain aspects of political arguments, for instance, their logical consistency. Plato, using the dialectical method, analyses and criticises a number of definitions of justice in his attempt to arrive at its ‘real’ meaning.

SELF-ASSESSMENT EXERCISE

Describe the activities in political philosophy analysis

4.0 CONCLUSION

After reading through this unit, students should be able to understand the meaning of political inquiry, identify the various activities in political inquiry and be able to analyse these activities.

5.0 SUMMARY

In this unit, we have explained the meaning of political inquiry, the activities of political philosophy analysis and the contribution political philosophers to traditional and behavioural or scientific inquiry in political science.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define political inquiry
2. Critically examine the range of political inquiry.
3. Analyse the paradigmatic shift in the understanding of political inquiry.

7.0 REFERENCES/FURTHER READING

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UNIT 2 THE RATIONALE FOR POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the various reasons for the study political investigation and social research by students of political science. Political scientists are interested in acquiring knowledge about and understanding of a variety of important political phenomena. The unit used normative method of political inquiry as an example to establish various reasons for inquiry in social sciences and political science in particular.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- state the reasons for the study of political inquiry
- explain the importance of normative method of inquiry.

3.0 MAIN CONTENT

3.1 Reasons for the Study of Political Inquiry

Political scientists are interested in acquiring knowledge and understanding of a variety of important political phenomena. Some of us are interested, for example, in the conditions that lead to stable and secure political regimes without civil unrest, rebellion, or government repression. Some are interested in the relationships and interactions between nations and how some nations exercise power over other nations. Other political scientists are more interested in the relationship between the populace and public officials in democratic countries and in particular, in the question of whether or not public opinion influences the policy decisions of public officials.

There are two major reasons why students should learn about how political scientists conduct empirical research. First, citizens in contemporary society are often called upon to evaluate empirical research about political phenomena. Debates about the wisdom of the death penalty, for example, frequently hinge on whether or not it is an effective deterrent to crime, and debates about term limits for elected officials involve whether or not such limits increase the competitiveness of elections. Similarly, evaluating current developments in Africa, Asia, Europe, America and Latin America requires an understanding of the role of competitive elections, rights of expression, religious tolerance, and the ownership of private property in the development of democratic institutions and beliefs. In these and many other cases, thoughtful and concerned citizens find that they must evaluate the accuracy and adequacy of the theories and research of political (and other social) scientists.

A second reason for learning about Political Science research methods is that students often need to acquire scientific knowledge of their own, whether for a term paper for an introductory course on Nigerian government and politics, a research project for an undergraduate seminar, or a series of assignments in a course devoted to learning empirical research methods. Familiarity with empirical research methods is generally a prerequisite to making this a profitable endeavour.

The prospect of learning empirical research methods is often intimidating to students. Sometimes students dislike this type of inquiry because it involves numbers and statistics. Although to understand research well one must have a basic knowledge of statistics and how to use statistics in analyzing and reporting research findings, the empirical research process that we describe here is first and foremost a way of thinking and a prescription for disciplined reasoning. Statistics will be introduced only after an understanding of the thought process involved in scientific inquiry is established, and then in a nontechnical way that should be understandable to any student familiar with basic algebra.

Political inquiry is methodologically diverse and appropriates many methods originating in political and social research. In Political Science, approaches include *positivism*, *interpretivism*, *rational choice theory*, *behavioural*, *structuralism*, *post-structuralism*, *realism*, *institutionalism*, and *pluralism*. Political Science, as one of the Social Sciences disciplines, uses methods and techniques that relate to the kinds of inquiries sought. Primary sources are such as historical documents, and official records; secondary sources such as scholarly journal articles, statistical analysis, case studies, and model building.

Political inquiry makes use of different methods, which can be categorized as normative and empirical research methods. The use of normative method is as important as the empirical method. In most cases, the two methods are combined to allow for comprehensive and eclectic analysis of political phenomena.

The normative method of political inquiry denotes emphasising what ought to be. It is characterised by statements which purport to explain what should or should not be valued. This method is closely related to ethical and philosophical methods in orientation. It sets to examine the forces operating upon or within an entity or group of entities, and focuses on certain definable guidelines for the conduct of state affairs. There are four dominant aspects of the normative method, namely: historical, legalistic and philosophical and these are rooted in the classical political philosophy represented by Plato and Aristotle, the church fathers, St. Thomas Aquinas and St. Augustine, and also modern philosophers like Thomas Hobbes, John Locke, Jean Jacques Rosseau, Immaneul Kant, Hume, Burke and Mill. The fundamental question asked by these philosophers concerning the affairs of the state borders on the issues of rights, justice, duties and obligations.

The Italian Statesman Niccolo Machiavelli, in his philosophical work *The Prince*, enunciated how rulers should deal with other rulers if they are to advance the interests of the state and maintain stability in the state. In other words, sovereign heads should employ whatever means necessary to attain the goals of the state. Immanuel Kant, in his Perpetual Peace, proposed an organized state in order to get out of the state of nature, which breeds conditions of war. From the historical perspective, normative method presupposes that the study of Political Sciences was initially part of history and that it gives credence to the understanding of historical background of political system as the basis for understanding or comparing political systems. This explains the analysis of political phenomena from the perspective of the historiography. However, this method has been criticized of falling short of necessary instrument for comprehensive understanding of political phenomena.

Also, the legalistic aspect of normative method indicates that the study of Political Science was also part of the study of Law as a discipline. It presupposes the understanding of political phenomena from the legal point of view or through the understanding of constitutional framework of political systems. It emphasizes the legal norms of a state, while the philosophical orientation emphasizes the ideas of the various philosophers on the ideal state. It portends the ideal situation of what the structure of the state should be. It is otherwise referred to as the *apriori*

or armchair method of reasoning. However, the normative method generally is faced with a problem. It does not rely on facts or scientific orientation.

SELF-ASSESSMENT EXERCISE

Differentiate between *normative* and *empirical* methods of political inquiry.

4.0 CONCLUSION

After reading through this unit, students should be able to understand the importance of normative and empirical methods of political inquiry. Also, they should be able to explain the reasons for the study of political inquiry by political science students.

5.0 SUMMARY

In this unit, we have explained the usefulness of normative and empirical methods of political inquiry and their relationship to each other and the importance of the study of political inquiry by social scientists.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the meaning of normative research.
2. Identify and explain the reasons for the study of political inquiry.

7.0 REFERENCES/FURTHER READING

Apter, D. (1977). *Introduction to Political Analysis*. New Delhi: Prentice Hall.

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UNIT 3 THE FUNDAMENTALS OF POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit examines the origin and foundational steps to scientific inquiry in the study of political science. It explains the *traditional* and *behavioural* methods of political inquiry. It explains the importance of the two in political investigation. It establishes the need for consideration of traditional method of political inquiry for holistic and comprehensive political investigation rather than solely relying on behavioural method. The unit further explains the activities of the traditional method of political inquiry and its heuristic value as the foundation of political investigation while analysing the contributions of different scholars to the revolutionary movement in the study of Political Science and the contributions of different renowned scholars to the development of scientific orientation in Political Science investigation.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain what is meant by traditional method of political inquiry
- understand the justification for the scientific inquiry in politics.

3.0 MAIN CONTENT

3.1 The Traditional Method of Political Inquiry

The traditional method of political inquiry includes several methods of analysing politics in which the three most important approaches are the historical, legalistic, and the institutional.

From its 19th century beginnings, political science was looked upon by many of its practitioners as primarily an historical discipline. Little difference was recognised between History and Political Science. The latter was considered a branch or division of the former. According to Richard Jensen (1969), the motto of this generation of political scientists was "History is past politics and politics present history". Thus, Political Science was really Political History, and included such fields as the history of political parties, foreign relations, and great political ideas.

While the historical approach had its heyday in the last century, it is still evident at present. This is why it is possible to say, for instance, that Historians and Political Scientists use the same methods. A variation on the historical approach is used by those Political Scientists who might be labeled historians of the present. They give detailed descriptions of contemporary political events, in the narrative style of the historian. The results are often called "case studies". The well done case study's realistic portrayal of politics is no doubt useful. The notion links study of politics to law or the legal system. This provides the basis for the legalistic approach, an approach that views political science as primarily the study of constitutions and legal codes. This explains the importance of legality in many definitions of politics.

Reaction to the historical and legalistic approaches probably stimulated the third traditional school of thought, the institutional approach. As Political Scientist realised that there was more to politics than legal codes and constitutions, a shift in emphasis took place. There was talk about studying political realities, that is, what politics actually is, not just its history or legal manifestations. The most obvious reality of politics is the political institutions; legislatures, executives, and courts receive the primary attention of the institutionalism. What we have is normative empiricism, which manifests itself, for the work done and mainly descriptive – detailed descriptions of political institutions, not explanations of the political system, are the goals of the institutionalism.

3.2 The Behavioural Method of Political Inquiry

The traditional approach gains most of its meaning as a single orientation when it is contrasted with the behavioural approach. The latter seems to have begun after World War II as a sort of protest movement by some Political Scientists against traditional Political Science. The general claims of the new behaviouralists were; first, that earlier Political Science did not measure up as a producer of reliable political knowledge. Political Scientists working in important wartime decision-making positions made this discovery when they had to draw upon existing knowledge of domestic and international politics.

Secondly, and on a positive note, more reliable knowledge of politics could be achieved through different approaches and methods.

The scientific aspiration known as political behaviour is definitely one of the latest development in the study of political science. In fact, it touches the root of the designation of Political Science as a discipline and initiates the change from government to politics. Thus, the assertion by (Bamisaye and Raforji that the study of politics is nothing without the study of man, for man's personality and behavioural pattern dominate the development of political actions" (Bamisaye and Raforji 2009). This was a very important because the traditional approach was characterised by configurative description, parochialism, formal legalism, conservative methodological insensitivity, non-scientific pre-occupation.

Thus, David Easton laid down certain assumptions and objectives of behaviouralism which he would regard as the intellectual foundation stones on which the scientific movement has been constructed. They consist of: (i) regularities (ii) verification (iii) techniques (iv) quantification (v) values (vi) systematization (vii) pure science (viii) integration. Behaviouralism employs the use of observation as an instrument of scientific inquiry for the purpose of analysis and explanation. For instance, observing a political rally provides a Pollster an opportunity to make explanation and provides analysis of the programme of a political party or an individual.

SELF-ASSESSMENT EXERCISE

Analyse the behavioural method of political inquiry

4.0 CONCLUSION

After reading this unit, students are expected to understand the meaning of political inquiry, the methods of political investigation as found in traditional and behavioural methods. They should be able to identify and explain the opinion of different Political Scientists on the revolutionary change in the methods of political inquiry. The students should also be able to distinguish normative and empirical methods or approaches to the study of political science.

5.0 SUMMARY

In this module, we have explained the meaning of political inquiry and the developmental methods of political investigations in political science. We have also explained the views of scholar and empirical

method of inquiry; the traditional method of inquiry and the scientific or behavioural method of inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the method of political inquiry.
2. Discuss various activities of traditional method of political inquiry
3. Relate political investigation to other disciplines in the Arts that you may know.

7.0 REFERENCES/FURTHER READING

Apter, D. (1977). Introduction to Political Analysis. New Delhi: Prentice Hall.

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UNIT 4 GENERALIZATIONS

CONTENTS

1.0 INTRODUCTION

This unit introduces you to the meaning of generalisation in political inquiry. It explains the need for generalisation and the broad understanding of the term generalisation. It also explains the activities of generalisation as well as the usefulness of generalisation in political inquiry. This unit also explains the importance of generalisation in political inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- define generalisation in political inquiry
- explain the need for generalisation in political inquiry
- examine the nature of generalisation

3.0 MAIN CONTENT

3.1 Meaning of Generalisation

Generalisation expresses a relationship between concepts. To identify those nations that have democratic political system (according to a dichotomous classificatory concept) is significant. To discover that democratic nations tend to have a higher level of education, human rights respect and economic prosperity is probably more significant, for our knowledge is broadened; the world of politics makes more sense because we begin to see their pattern, that is, the relationship between apparently individual facts. It is at the point when concepts are connected and the connections tested and either confirmed or rejected that science begins to take off.

3.2 Utilities of Generalisation

Generalisations are important to political science because they give us a more sophisticated and wide-ranging description of political phenomena. The second reason for the importance of generalisations flows from the nature of scientific explanation and prediction. Furthermore, very sound explanation and prediction contains at least one generalisation; without generalisations, there could be no explanations or predictions. Thus, the development of generalisation is essential if Political Science is not only to describe political phenomena, but also to explain and predict them. The goal of every Political Scientist is the development of a systematic knowledge of politics. Here, systematic means are generalised.

It has been asserted that the purpose of scientific generalisations is the explanation and prediction of political behavior. The explanatory power of generalisation may be distinguished from its explanatory appeal. The concept of explanatory power relies on the distinction between the ability to predict an event before its assumption in a generalisation and the ability to predict the event after its assumption. If the assumption of an event in a generalisation substantially increases the ability to predict the event, the generalisation has great explanatory power. Explanatory power is thus an objective concept insofar as the distinction between the probability of an accurate prediction of an event before its assumption in a law or theory and the probability of an accurate prediction after such an assumption can be measured.

The concept of explanatory appeal, on the other hand, is strictly a subjective phenomenon. A generalisation with explanatory appeal engenders satisfaction that an event has been understood. The explanatory appeal of a theory in terms of its “integrative potential” refers to the extent to which a wide variety of apparently disparate events is “seen in the light of the theory to be related”. But a generalisation can provide a satisfying explanation even though its integrative potential is low, a satisfaction that may be the result of an unjustifiably inferred causation.

Obviously, in the social and behavioural sciences, the explanatory power of generalisations is much lower than those of the natural sciences in that the predictive power generated by propositions in the social sciences affords a rather low probability of accuracy. The probability of accurate prediction is a direct function of the other-things-being-equal (ceteris paribus) qualifier.

3.3 Types of Generalisations

There are two forms of generalisation i.e. *hypotheses* and *laws*. Both are generalisations because they share certain characteristics; they have the same form and most meet the same structural requirements. We cannot tell whether the sentence "Democratic political systems tend to be stable" is a law or a hypothesis if we are unaware of its context. The major difference can be traced to the claim that is made about each.

A hypothesis is a guess about relationship between concepts. After being tested against available evidence according to the principle of scientific method, it is accepted or rejected. If accepted, it is labeled a law. We might say that a law is a true hypothesis; or for those who prefer a weaker notion than truth, a well-confirmed hypothesis. The later formulation might be more desirable, for it implies that unnecessary or contingent nature of all scientific knowledge. The use of "truth," on the other hand, seems to imply too many that scientific laws express eternal and immutable relationships. For the scientist, however, the difference between "true" and "well-confirmed" is largely semantic, for he realizes the conditional nature of scientific knowledge, whichever label is used.

Since hypotheses and laws have the same form and differ only in regard to whether or not they have been empirically confirmed, we can, in a methodological analysis talk about "generalisations" without concerning ourselves with the distinction between its two main varieties.

SELF-ASSESSMENT EXERCISE

Explain generalisation in Political Inquiry.

4.0 CONCLUSION

In this unit, we have established the relationship between political inquiry and generalisation and explained how they interact to provide lucid explanation of political phenomena. The unit has also analysed the importance of generalisation in political inquiry and the activities involved in generalisation to show relationship between concepts in political investigation.

5.0 SUMMARY

This unit has explained the meaning of generalisation and its relationship with concepts in political inquiry. The unit has also explained the various importance of generalisation as they relate to the activities involved in generalisation.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe the role of generalisation in political inquiry
2. Analyse the relationship between concepts and generalisation.
3. Identify and explain the importance of generalisation in political inquiry.

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Gibson, Q. (1960). *The Logic of Social Enquiry*. London: Routledge & Kegan.

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UNIT 5 EXPLANATION AND PREDICTION IN POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the meaning of explanation and prediction in political inquiry. It analyses the importance of explanation to political phenomena and how observable activities can be explained to offer prediction of the political activities. The unit explores the conditions necessary for explanation and the importance of prediction in political inquiry. Also, the unit examines the relationship between explanation and prediction in political inquiry. In this regard, the unit explores the possibility of making explanation without prediction and vice-versa.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- describe explanation and prediction in political inquiry
- explain the relationship between explanation and prediction in inquiry
- discuss the conditions necessary for explanation.

3.0 MAIN CONTENT

3.1 Logical Identity

One of the reasons for a Political Scientist taking an interest in explanation is the fact that all Political Scientists have to predict. This justification is valid because of the logical identity between explanation and prediction. The identity is based upon the fact that both explanation and prediction require laws and initial conditions. Thus, if one has a

valid explanation, he should be able to employ it to predict, and vice versa. If, given the proper initial conditions, one could not have predicted the event that was explained, the explanation was not adequate in the first place. If it is possible to explain adequately without having a potential prediction, then the door is left open for any pseudo-explanation of a given phenomenon.

An explanation may be incomplete and yet be accepted by Political Scientists. This has led some to argue that while one can explain, using such partial explanations, prediction is impossible. In the strictest sense, they are not explanations, and so naturally, they do not predict. In this period of developing science of politics, we must often content ourselves with partial explanations, or even less. But this practical concession does not weaken the model of explanation to the point that it no longer explains.

SELF- ASSESSMENT EXERCISE

Explain your understanding of political inquiry

3.2 The Completeness of Explanations

In examining the nature of scientific explanation, we have ‘not meant to give the impression that Political Scientists ought to sit on their hands until they have before them full-blown deductive or statistical explanations. At this stage, such a requirement seems unrealistic and overly restrictive. Thus, the arguments against the possibility of a science of politics (and therefore the scientific explanation of political phenomena), which we attempted to refute on methodological grounds are often of practical significance. For instance, while the complexity of political phenomena presents no logical barrier to homological explanation, it can create difficulties for the political scientist conducting research. No claim is being made that Political Science is simple and that complete homological explanation is immediately achievable.

On the other hand, we have argued that explanation in any science must meet certain requirements, and it will only prove disillusioning to attempt to achieve explanation by drastically weakening these requirements. Taking a moderate position, one ought to realize that there are various degrees of completeness possible in explanation; one can make a series of distinctions between degrees of completeness and yet draw the line at inadequate explanations. In other words, if we are explicit, the class of incomplete but pragmatically acceptable explanation types can be distinguished from pseudo-explanations,

arguments that have no explanatory value. The addition of one or several elements (usually laws) to an incomplete explanation makes it complete. But no addition could make a pseudo-explanation acceptable short of complete revision.

Carl Hempel has explicated this criterion of completeness for explanations rather thoroughly. Using his analysis as a guide, we can spell out a typology of completeness for Political Scientists. First are complete explanations, those that explicitly state all laws and initial conditions. Hempel points out that such perfectly complete homological explanations are rarely achieved by scientists.

In the natural sciences, this is usually because the explainer assumes that certain laws will be presupposed, and so only the necessary facts are formally stated. “If judged by ideal standards, the given formulation of the proof is elliptic or incomplete, but the departure from the ideal is harmless; the gaps can readily be filled in.” In other words, if asked, the scientist could easily provide the missing laws (or initial conditions) that would completely account for the phenomenon in question. The number of elliptical explanations in Political Science is not great. The discipline is not well enough developed to allow a Political Scientist the luxury of assuming that others are aware of the laws he is implying. This is one reason for asking that Political Scientists explicitly formulate their generalisations.

3.3 Partial Explanation

Hempel’s scheme has a category that is more relevant to Political Science. This he calls the partial explanation. Like the elliptical type, it fails to explicitly formulate all the generalizations it is based upon. But even when the generalizations are made evident, the explanandum is not completely accounted for. By *explanandum*, it means the elements that are used to explain a phenomenon. All that is demonstrated is that something in a particular general class is to be expected. An explanation is partial because its laws cannot completely account for its explanandum; this is the nature of most, if not all laws about political phenomena.

One might have an explanation of sorts, but still not think it meets even the requirements of the partial explanation. In this case, we might classify the argument as an explanation sketch. Such an argument is characterised by a lack of explicitness and logical rigor; yet it points to an explanation. Thus, it serves as a sort of outline or sketch to direct one’s attention toward possible relationships and ultimately a more complete explanation. The Social Sciences, including Political Science,

abound with such explanation sketches. They are valuable if it is remembered that a complete explanation is still far in the future.

Once again, we must admit that in its present stage of development, Political Science must often be satisfied with the explanation sketch. But that is an empirical, not a logical, shortcoming. The formulation of explanation sketches is closely related to the development of hypotheses. Both involve speculation and educated guesses. An explanation sketch will have hypotheses as a major component which if shown to be scientific laws, will allow the sketch to become a full-fledged explanation.

All of these incomplete explanation types can be distinguished from the pseudo or non-explanation according to one main criterion; 'No matter how incomplete, it will be possible to test even an explanation sketch' (admittedly, this may take some doing). That is, even in its rough state, the incomplete explanation makes some reference to empirical entities to the world of experience. Such is not the case with non-explanations. "In the case of non-empirical explanations or explanation sketches the use of empirically meaningless terms makes it impossible even roughly to indicate the type of investigation that would have a bearing upon these formulations". This distinction between incomplete and pseudo-explanations is important to our analysis. Many of the explanations that one finds in Political Science are incomplete rather than pseudo.

Thus, while they should be evaluated and criticised according to the standards of sound scientific explanation, they should not be dismissed as useless. To the contrary, their explication should lead to more explanations that are complete when more sophisticated laws are available.

SELF -ASSESSMENT EXERCISE

What do you understand by explanation in political inquiry?

4.0 CONCLUSION

This unit has explained the criterion for complete explanation. It has identified the conditions for complete and incomplete explanation and the implications of these for prediction. Apart from this, the unit has explained the meaning of explanation and prediction in political inquiry and their importance for understanding political inquiry.

5.0 SUMMARY

After reading this unit, students should be able to understand the meaning of explanation and prediction in political inquiry. They should also be able to identify the criteria for making complete explanation and the elements for complete and incomplete explanation.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the meaning of explanation in political inquiry.
2. Analyse the usefulness of prediction in political inquiry.
3. Examine the criteria for complete explanation in political inquiry.

7.0 REFERENCES/FURTHER READING

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MODULE 3 THE NEXUS BETWEEN LOGIC AND POLITICAL INQUIRY

INTRODUCTION

The major task of this module is to throw enabling light on the connection between logic and political inquiry for the benefit of the justification of any political inquiry as a scientific inquiry. This is important because an adroit understanding of the deep connections between *political inquiry* and *logical reasoning* lays the foundations for greater scientific research works and other issues relating to political investigation which will be discussed in later modules. At the end of this module you should be versatile in every aspect of political investigation as a scientific investigation.

UNIT 1 LOGIC OF POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit summarises the methodological issues surrounding the study of political science scientific research. The unit highlights the nature, features and interconnections between logic, approaches and methods of political inquiry. The unit presents a synopsis of these three aspects of the study of political science.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- state the contribution of logic to political inquiry
- apply logical reasoning while carrying out any scientific investigation.

3.0 MAIN CONTENT

3.1 Methodological Underpinnings

There is a close connection between logic, approaches and methods of political inquiry. The logic of political inquiry refers to the underlying ontological and epistemological justification of the approaches and methods of political inquiry (Brewer 2000). This provides the framework within which approaches and methods of political inquiry are couched. It is a common practice in the social sciences to locate research approaches and methods within broader ontological and epistemological foundation of knowledge. In fact, a specific field of study examines the 'fit' between research methods and the logic that validates them. This field of knowledge is known as the philosophy of social research.

Unlike the logic of scientific political inquiry, an approach to the study of politics simply means "a general strategy for studying political phenomena". It is the theoretical and philosophical standpoint that determines the focus of a research; that informs the choice of questions a researcher could ask, and the kind of data to consider. In this sense, a particular approach may emphasise economic, institutional, behavioural, or normative issues, while others may focus on gender and discursive issues. In all, approaches to the study of politics are the theoretical and philosophical focal point which informs data collection and analysis.

3.2 Deduction and Induction

Deductive logic is the reasoning of proof, or logical implication. It is the logic used in mathematics and other axiomatic systems such as formal logic. In a deductive system, there will be axioms (postulates) which are not proven. Indeed, they cannot be proven without circularity. There will also be primitive terms which are not defined, as they cannot be defined without circularity. For example, one can define a line as a set of points, but to then define a point as the intersection of two lines would be circular. Because of these interesting characteristics of formal systems, Bertrand Russell humorously referred to mathematics as "the

field where we don't know what we are talking about or whether or not what we say is true".

All theorems and corollaries are proven by exploring the implications of the *axiomata* and other theorems that have previously been developed. New terms are defined using the primitive terms and other derived definitions based on those primitive terms. In a deductive system, one can correctly use the term "proof", as applying to a theorem. To say that a theorem is proven means that it is impossible for the axioms to be true and the theorem to be false.

Induction learning about the physical world requires the use of inductive logic. This is the logic of theory building. It is useful in such widely divergent enterprises as science and crime scene detective work. One makes a set of observations, and seeks to explain what one sees. The observer forms a hypothesis in an attempt to explain what he/she has observed. The hypothesis will have implications, which will point to certain other observations that would naturally result from either a repeat of the experiment or making more observations from a slightly different set of circumstances. If the predicted observations hold true, one feels excitement that they may be on the right track. However, the hypothesis has not been proven.

The hypothesis implies that certain observations should follow, but positive observations do not imply the hypothesis. They only make it more believable. It is quite possible that some other hypothesis could also account for the known observations, and may do better with future experiments. The implication flows in only one direction, as in the syllogism used in the discussion on deduction.

3.3 Logic and Study of Politics

The logic and approaches to the study of politics are linked to the methods of political inquiry. Methods of political inquiry are the technical rules that lay down the procedures for how data can be obtained and analysed (Brewer 2000). As procedural rules, they tell people what to do and what not to do if they want to produce knowledge. Research methods can be distinguished according to the stage of research. There are methods of inquiry, which state how the study will be carried out – whether it will be a case study, comparative analysis or survey. There are also methods of data collection, which assert how data will be collected – whether data will be collected through interview, questionnaire or documents. Finally, there are methods of data analysis, which specify how data will be analysed – whether the research will use statistical or non-statistical methods.

In sum, it is argued that knowledge production in political science follows the interconnectedness between the logic (the ontological and epistemological justification for approaches and methods), the approaches (the theoretical and philosophical basis for data collection and analysis), and methods (the procedural rules for data collection and analysis).

The logic of political inquiry revolves around two major issues – determining research paradigms and strategies. Research paradigms are the broad ontological and epistemological traditions through which scholars attempt to understand the social world. On the other hand, research strategies are the processes required to answer research questions, to solve intellectual puzzles, and to generate new knowledge (Blaikie 2007). Research strategies specify the starting point, series of steps, and the end point of any research endeavor. Together, research paradigms and strategies underpin the various approaches and methods of political inquiry.

SELF-ASSESSMENT EXERCISE

What are the major methodological issues on the political science research?

4.0 CONCLUSION

In this unit you are made to understand that logical approaches to the study of political science are linked to the methods of political inquiry. This is a procedural rule that tells researchers what to and what not to do when they want create impetrative knowledge in the field of political science.

5.0 SUMMARY

Investigation in political science follows the interconnectedness between the ontological and epistemological justification from approaches, the theoretical and philosophical basis for data collection and analysis.

6.0 TUTOR- MARKED ASSIGNMENT

1. What do you understand by logic and political approach?
2. Explain the two major issues that determine research paradigms.

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UNIT 2 RESEARCH PARADIGMS

CONTENTS

1.0 INTRODUCTION

Research paradigms are different *ontological* and *epistemological* perspectives from which researchers approach the study of politics. Two major research paradigms are dominant in political science – the positivist and interpretative paradigms. This unit expatiate these two major paradigms in details for easy understanding by the students. This is in conformity with other sectors of the course as a whole.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- define research paradigms
- analyse ontological perspectives from epistemological perspectives.

3.0 MAIN CONTENT

3.1 The Positivist Paradigm

The *positivist paradigm* is modeled on the methods of the natural sciences. It posits that all sciences, whether natural or social, should use the epistemology of empiricism. The epistemology of empiricism emphasises the search for and discovery of reality. Positivists regard reality as consisting of discrete events that can be observed by human senses. They seek knowledge based on systematic observation and experiment, with the goal of discovering social laws analogous to the natural laws uncovered by the methods of natural sciences. Positivist analysis seeks to hypothesise and then evaluate causal inferences about

social phenomena that will be generalisable beyond the specific data analysed.

A fundamental assumption of the positivist paradigm is the existence of objective reality and facts, which can be known, understood or approximated through appropriate research methods. Positivist analyses must be both replicable and testable across cases, and the validity of the analysis can be evaluated accordingly. The positivist paradigm maintains that a true explanation or cause of an event or social pattern can be found and tested by scientific standards of verification.

Auguste Comte is believed to be the father of positivism (Ritzer 1996: 13). Comte was confident that scientific knowledge about the society can be accumulated and used to improve human existence. He insists that scientific study of the society is possible if scholars would restrict themselves to collecting data about phenomena which can be objectively observed and classified. Comte argued that social scientists should not be concerned with the internal meanings, motives, feelings and emotions of individuals, since these mental states exist only in a person's consciousness and thus, cannot be observed and measured in any objective way. Comte believes that it is possible to classify the social world in an objective way.

Using these classifications, it was possible to count sets of observable social facts and so produce statistics. To Comte, positivist analysis entails a search for *correlations* and *causal connections*. A *correlation* is the tendency for two or more things to be found together and may refer to the strength of the relationship between them. A strong correlation between two or more social phenomena may prompt positivists to suspect that one of the phenomena is causing the other to occur. However, this might sometimes not necessarily be the case. Thus, it is important to analyse data carefully in a logical manner before concluding that one phenomenon causes another.'

3.2 The Interpretativist Paradigm

The *interpretativist paradigm* has its roots in the field of anthropology. It is closely associated with the work of Clifford Geertz. Geertz (1973) proposed a shift away from positivist analyses towards the study of communally defined subjective understanding. Geertz notes that objective truth cannot be known since all attempts to understand "facts" are viewed through various subjective lenses, including the researchers'. This view sees people's understandings, and therefore subjectively constructed social reality, as "fleeting, dynamic, and constantly changing" (Roth and Mehta 2002). Geertz (1973) insists that the study

of culture for instance, is not an experimental science in search of law but an interpretative one in search of meaning. He contends that what we construe as fact in our data cannot be truly objective because they are really "our own constructions of other people's constructions of what they and their compatriots are up to". Because interpretative analysis is linked to specific cultural systems, it is hard to systematically theorise, assess or to empirically test its validity. Rather, interpretative analyses are taken to be self-validating.

The legitimacy of the analysis is judged by how well the phenomenon is explained with the corroboration of the evidence put forth. The interpretativist paradigm does not seek an objective truth so much as to unravel patterns of subjective understanding. It assumes that all versions of the truth are shaped by the viewer's perceptions and understanding of their world. In sum, the interpretativist paradigm seeks to illuminate social meanings that reflect cultural beliefs and values while the positivist paradigm seeks to establish causal laws to explain objectively viewed phenomena.

3.3 Research Strategies or Style of Reasoning

There are two major research strategies or style of reasoning in the field of political science, namely the inductive and deductive research strategies. An inductive research strategy begins with a number of specific statements and concludes with a general or universal statement. The premises of the inductive argument are statements about specific instances of some events or state of affairs and the conclusion is a generalisation drawn from the premises. In an inductive argument, the conclusion makes claims that exceed what is contained in the premises; it promises to extend knowledge by going beyond observed instances of some phenomenon.

Inductive research strategy consists of four stages that correspond to a popular conception of the activities of a scientist. These stages include: Make careful observations, that is, all facts are observed and recorded without selection as to their relative importance; Conduct of experiments or tests, including comparison and classification of facts without the use of hypotheses; rigorously analyse the data obtained and from this analysis, inductively draw generalisations as to the relations between them and; Produce new discoveries, theories and generalisations, which will be subjected to further testing (Hempel 1966).

Opposed to the inductive research strategy is the deductive research strategy. Whereas *inductivists* look out for *evidence* to confirm their

generalisation *deductivists* try to *falsify* their hypotheses, that is, unconfirmed speculations about phenomenon. A deductive argument moves from premises, at least one of which is a general or universal statement, to a conclusion that is a specific statement. The deductive research strategy begins with a question or a problem that needs to be understood or explained. Instead of starting with observation, it begins by producing a possible answer to the question; to look for an explanation for the problem in existing theory, or to invent a new theory. (Popper,1959).

The deductive and inductive strategies follow the division between positivism and interpretativism. While the main concern of positivists is to establish causal explanation of social phenomena through theory testing, interpretativists seek to arrive at plausible interpretation of social phenomena through theory building. Theory building emphasises the exploration of meanings, as such, it involves an inductive strategy. Scholars attempting to build theory begins with data collection through observations, proceed to data analysis through comparison and classification of facts, and then end with the production of new discoveries, theories and generalisations that will be subjected to further testing.

On the other hand, researchers interested in theory testing are focused on establishment of truth or law. Following a deductive strategy, these scholars begin by putting forward a tentative idea or a hypothesis, with the help of other previously accepted hypotheses, or by specifying conditions under which hypotheses are expected to hold, they deduce a conclusion(s), and test the conclusion by gathering appropriate data and making the necessary observations/experiments. If the data are not consistent with the conclusion, the theory must be false, but if the conclusion passes the test, then the theory is corroborated. Thus, there is a close relationship between research paradigm and strategy. The choice of research paradigm and strategies has serious implications for research approaches and methods that scholars can adopt, especially in terms of determining the questions and methods that would lead to establishment of the truth or discovery of meanings.

SELF -ASSESSMENT EXERCISE

Examine the importance of research strategies to the conduct of political inquiry

4.0 CONCLUSION

This unit has justified the position that opposed to the inductive research strategy is the deductive research strategy. Whereas inductivists look out for evidence to confirm their generalisation deductivists try to falsify their hypotheses, that is, unconfirmed speculations about phenomenon. A deductive argument moves from premises, at least one of which is a general or universal statement, to a conclusion that is a specific statement.

5.0 SUMMARY

The epistemologies of empiricism emphasise the search for and discovery of reality. Positivists regard reality as consisting of discrete events that can be observed by human senses.

6.0 TUTOR- MARKED ASSIGNMENT

1. Explain the two major style of reasoning in the field of political science.
2. What do you understand by research paradigm?
3. Discuss the differences between the positivist and interpretative paradigms.

7.0 REFERENCES/FURTHER READING

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UNIT 3 APPROACHES TO POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

There are several approaches to political inquiry, each stressing different ideas and political reality. This unit examines the following approaches; the behavioural, institutional, rational choice, constructivist, feminist, and normative approaches. This is to give the students a sense of what a research approach really means.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- identify and use the different approaches to political inquiry
- discuss the approaches and their applications to different styles of political inquiry.

3.0 MAIN CONTENT

3.1 The Behavioral Approach

Historically, the behavioural approach originated as a protest movement within political science. Behaviouralists share a strong sense of dissatisfaction with the achievements of conventional political science, especially the historical, philosophical, and descriptive-institutional approaches. The advent of the behavioral approach signals the absorption of scientific method into political science. It also underscores the efforts within political science to give meaning to behaviour by relating it to some empirical theoretical context. Thus, the behavioural

approach sought to improve our understanding of politics by seeking to explain the empirical aspects of political life through the means of methods, theories, and criteria of proof that are acceptable according to the canons, conventions, and assumptions of modern empirical science.

The behavioural approach emanated as a psychological concept adopted to help eliminate from scientific research all reference to subjective issues such as intentions, desires, or ideas (Easton 1967). To the behaviouralists, only those observations obtained through the use of the sense organs or mechanical equipment were to be accepted as data. The subject matter of behavioural research is the observable behaviour generated by external stimuli rather than inferences about the subjective state of mind of the person being observed. As a psychological concept, the behavioural approach is concerned with the individual, especially the face-to-face relationship among individuals. Behaviouralists look at actors in the political system as individuals who have the emotions, prejudices, and predispositions of human beings. As such, they tend to elevate human beings to the centre of research attention. They argue that the traditionalists have been reifying on institutions, treating them as entities that stand apart from the individuals that constitute them (Easton 1953). Behaviouralists therefore study the political process by looking at how it relates to the motivations, personalities, or feelings of human actors.

The key idea behind the behavioural approach is the conviction that there are certain fundamental units of analysis relating to human behaviour out of which generalisations can be made, and that these generalisations might provide a common base on which the specialised science of man in society could be built (Easton 1967). This has led to the search for a common unit of analysis that could easily feed into the special subject matters of each of the social science disciplines. Ideally, the units would constitute the particles out of which all social behaviour is formed and which manifest themselves through different institutions, structure, and processes. The adoption of the label “behavioural science” symbolises the expectation that some common variable may be found, variables of a kind that will stand at the core of a theory useful for the better understanding of human behaviour in all fields.

3.2 The Institutional Approach

The institutional approach focuses on the construction and operation of political institutions. Political scientists place emphasis on four basic types of political institutions. The first is the rule making institutions that make collectively binding decisions about how to regulate the common interests in the society. The second is rule applying institutions that implement collectively binding decisions. The third is rule

adjudicating institutions that deal with disputes about how to interpret the general rules laid down by rule making institutions. Finally, the rule enforcing institutions punish rule breakers. The study of the above institutions has occupied a central place in political science as a discipline. For a long time, political scientists studied these institutions as formal, static organizations such as parliaments, bureaucracy and courts.

Under the new institutional approach, institutions can be both formal and informal. A formal institution is constituted by a set of formal rules that can be derived from codified legal orders such as a written constitution. On the other hand, an informal institution encompasses informal rules derived from particular established norms, conventions or codes of conduct, which shape the behaviour of people who implicitly or otherwise have a loyalty to that code and are subject to certain level of controls if they violate the norms. Formal institutions are often secured by the means of the employment of physical violence against non-compliance, while informal institutions are usually guaranteed by the means of non-violent sanctions such as expulsion and shaming (Lane and Ersson 2000:34).

Institutions can also be divided into micro-, macro-, and meta-institutions. A typical micro-institution operates at the individual level and it is characterised by rules set by agents who are few that they can meet in a face-to-face situation and regulate their own common interests. On the other hand, a macro-level institution operates at the state level and it is represented by a general law decided by a government to steer the behaviour of actors who may or may not have participated directly in deciding the rule. Finally, a meta-institution acknowledges the heterogeneity of institutions and serves to bring together several inter-related institutions. Meta-institutions allow different institutions to intersect with each other so that ambiguities in the operations of the different institutions can be resolved. Meta-institutions are particularly useful in plural and complex societies where there are different groups and interests pursuing their own logic of action; through meta-institutions such societies can establish order, consensus and contain divisive class and ethnic conflicts.

Although the new institutional approach has a coherent mission, it does not constitute a unified body of thought. There are three new institutionalisms. The first is historical institutionalism which borrowed ideas from group theories and structural-functionalism, and sees institutions as “formal and informal procedures, routines, norms and conventions embedded in the organisational structure of the polity or political economy” (Hall and Taylor 1996). Historical institutional

scholars emphasize path dependence and unintended consequences in the process of institutional development. They call for the integration of institutional analysis with contributions that other factors, such as ideas, can make to political outcomes.

Rational choice institutionalism is the second perspective within the new institutionalism. Rational choice institutionalism developed out of the study congressional behaviour in America. This perspective draws its analytical tools from the "new economics of organisation", arguing that the relevant actors in an institutional set up have a fixed set of preferences, behave entirely instrumentally so as to maximise the attainment of these preferences, and do so in a highly strategic manner that presumes extensive calculation (Hall and Taylor 1996). Rational choice institutional scholars claim that an actor's behaviour is likely to be driven, not by impersonal historical forces, but by a strategic calculus – a calculus that is deeply affected by the actor's expectations about how other actors are likely to behave. Thus, the process of institutional evolution, continuity and change depends largely on the agreement of the relevant actors.

The sociological institutionalism is the last perspective of the new institutionalism. This perspective grew out of the subfield of organisational theory. Sociological institutional scholars define institutions "much more broadly than political scientists do to include, not just formal rules, procedures or norms, but the symbol systems, cognitive scripts, and moral templates that provide the 'frames of meaning' guiding human action". They argue that many of the institutional forms and procedures used by modern organisations were culturally-specific practices that draw from the myths and ceremonies devised by many societies and assimilated into organisations. Thus, they call for cultural explanation of the formal life, including bureaucratic practices. In summary, the institutional approach provides us with a diversified perspective of looking into how the polity is organised and the role of political institutions in the society.

3.3 The Rational Choice Approach

Rational choice approach is concerned with understanding human behaviour. It began as an approach in the field of economics, but over the years, it has become more widely used in political science. The basic assumption of the rational choice approach is that complex social phenomena can be explained in terms of elementary individual actions of which they are composed (Scott 2000). The rational choice approach is based on the standpoint of methodological individualism. This standpoint holds that the elementary unit of social life is the individual

human action. According Elster (1989) “to explain social institutions and social change is to show how they arise as the result of the action and interaction of individuals”.

In the rational choice approach, individuals are seen as motivated by the wants or goals that express their preferences as well as other incentives like reward or promise of reward. In pursuit of their preferences, individuals act within specific constraints such as punishment, threat of punishment, or lack of adequate information about the condition under which they are acting. The rational choice approach assumes that the choices made by actors are the choices that best help them achieve their objectives, given all relevant factors that are beyond their control. In other words, people do their best to achieve their interests under the prevailing circumstances shaped by incentives and constraints.

3.4 The Constructive Approach

The constructivist approach focuses on the role of ideas, norms, knowledge, culture, and argument in politics, stressing in particular the role of collectively held ideas and understandings on social life (Finnemore and Sikkink 2001). The constructivist approach is opposed to materialist approaches, which see political behaviour as determined by the physical world alone, and the individualist approaches, which treat collective understanding as simply an off-shot of individual action. Unlike the materialist and individualist approaches, the constructivist approach focuses on understanding the processes by which identities and interests originate and change. It seeks to understand how actors are shaped by the social environment in which they live and the consequences of these social transformations. The fundamental assumptions of the constructivist approach include holds that human interaction is shaped primarily by ideational factors, and not simply material ones; the most important ideational factors are widely shared beliefs, which are not reducible to individuals; these shared beliefs construct the interests and identities of purposive actors.

In terms of method of inquiry, constructivists adopt several research tools to capture inter-subjective meanings. These tools include discourse analysis, process tracing, genealogy, structured focused comparison, interviews, participant observation, and content analysis. They assume that all research involves interpretation, and thus, there is no neutral stance from which they can gather objective knowledge about the world (Price and Reus-Smith 1998). However, constructivists are divided over how interpretation should be done and what kinds of explanation it can yield (Putnam 1993).

3.6 The Normative Approach

The *normative approach* involves the discovery or application of *moral notions* in the study of politics. It represents all sorts of theory making about "what ought to be", as opposed to "what is" in political life. Normative thinkers focus on social institutions, especially those concerned with the exercise of public power, and the relationship between individuals and those institutions. They also evaluate the justifications given for the existing political arrangements and the justifiability of possible alternative arrangements (Glaser 1997). The outcome of normative analysis is usually prescriptive or recommendatory.

Normative scholars undertake their analysis using three major methods. First, they ensure that their moral arguments are internally consistent. They adopt argumentation styles from sources such as formal logic and analytic philosophy to measure this element. Secondly, normative scholars are concerned with the correctness of the empirical premises of their arguments. In this regards, they draw from social science disciplines such as history and social anthropology. Thirdly, normative scholars measure the conclusions of their arguments against their own moral intuitions. Since the 1970s, normative scholars have split into three major groups: the utilitarian, liberals, and communitarians.

4.0 CONCLUSION

In this unit the major approaches to scientific inquiry in the study of political science has been examined given the students the real meaning of research in the study of political science. The approaches are treated in details.

5.0 SUMMARY

The different approaches to political inquiry are identified and explained in details and each approach differentiated by their applications to different styles of political inquiry

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the method used by Normative scholars to undertake their analysis
2. Explain the main focus and the significance of institutional approach.
3. Compare and contrast the rational choice and the behavioural approaches.

7.0 REFERENCES/FURTHER READING

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UNIT 4 CONTEMPORARY METHODS IN POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

In the last unit each of the approaches discussed adopt different research methods. Thus, this unit is a review of fundamental research methods that most contemporary political scientists adopt for their investigation. The review is through three analytical standpoints – methods of inquiry, methods of data collection, and methods of data analysis.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- describe the fundamental methods of political inquiry
- exhibit good knowledge on the methods of data collection and analysis.

3.0 MAIN CONTENT

3.1 Methods of Inquiry

There are two main methods of inquiry, namely *experiment* and *observation*. However, students of politics rarely undertake experiments due to the complexity of political phenomena, especially their lack of regularity arising from indeterminacy and reactivity of political actors. Most analyses in political science are based on observation. There are three observational methods of political inquiry.

3.2 The Case Study Method

The first is known as case study and it is based on a *single case observation*. The case study method involves a detailed examination of a phenomenon or an aspect of a phenomenon to develop or test explanations that may be general sable to other cases. Case studies can serve five main purposes namely; creation of theories; testing of theories; identification of antecedent conditions; testing of the importance of antecedent conditions and; explanation of important issues, events or phenomena.

Some scholars see case studies as the weakest method of inquiry for two reasons vise; they argue that case studies provide the least opportunity to control for the effect of intervening variables and they argue that the results of case studies cannot be easily generalised to other cases. The above weakness notwithstanding, case study method has two strengths that make it appealing to many scholars. First, because case studies show the causal processes, it is usually easier to infer and test explanations that define how independent variable causes the dependent variable. Secondly, case studies often produce strong tests because their explanations/predictions are usually unique (George and Bennett 2005).

3.3 The Comparative Method

Comparative method is the second observational method of inquiry in political science. Comparative method is the analysis of a small number of cases, entailing at least two observations. The main goal of comparative analysis is to assess rival explanation as well as to examine two or more cases in order to highlight how similar or different they are. This helps in the process of developing a framework for interpreting how parallel processes of continuity or change are played out in different ways within each context. According to Collier (1993) comparison sharpens our power of description and plays a central role in concept-formation by bringing into focus suggestive similarities and differences among cases. Also, comparison is frequently used in testing hypotheses and it can contribute to the inductive discovery of new hypotheses and theory-building.

The main strength of the comparative method is that given the inevitable scarcity of time, energy and resources, the intensive analysis of a few cases seems more promising than the observation of many cases. However, the comparative method is flawed by its weak capacity to sort out rival explanations. Because comparative analysis studies few cases, there is the danger of having more rival explanations to assess than cases to observe. Regarding this problem, comparativists have suggested three

solutions: (1) increase the number of cases, (2) focus on comparable cases, and (3) reduce number of variables by combining variables or employing more parsimonious theory ((Lijphart 1971in Collier 1993).

3.4 The Survey Method

The third observational method of inquiry in political science is the survey method. A survey is a method of inquiry in which information is gathered from large number of individuals, called respondents, by having them respond to questions (Monette et al 1994). The survey method possesses a number of identifiable characteristics. First, surveys typically involve collection of data from large samples of people; therefore, they are ideal for obtaining data representative of populations too large to be dealt with by other methods. Secondly, surveys involve presenting respondents with a series of questions to be answered. These questions may address issues of fact, attitudes, opinions and future expectations. The most important strength of the survey method is the generalisation of its findings. Because the survey method makes use of standardised methods of drawing respondents, it is usually attractive as an objective method and its findings are held to be truly general.

An important point to note about surveys is that they only assess what people say about their thoughts, attitudes, behaviours, and beliefs. Surveys do not measure those thoughts, attitudes and behaviours directly. For instance, if public officials say in a survey that they are not corrupt, their actual attitude towards corruption has not been measured but only what they report about that behaviour. Thus, one can conclude that people report not being corrupt, but it cannot be concluded that people are not corrupt. Surveys therefore usually involve data on what people say about what they do, not what they actually do.

3.3 Forms of Data Analysis

Data in political science comes in two major forms i.e. *words* and *figures*. The data in the form of words are called *qualitative data* while the data in the form of figures are called *quantitative data*. Quantitative data are statistics based. In contrast, qualitative data come in various forms such as interview transcripts, recorded observations, and other documents – published and unpublished. What distinguishes qualitative and quantitative data is a set of assumptions, principles and values about truth and reality. Researchers that are inclined to quantitative data believe that the goal of science is to discover the truths that exist in the world and to use scientific method as a way to build a more complete understanding of reality.

Although some qualitative data operate from similar epistemological position, most of them recognise that the relevant reality in the social world is that which takes place in subjective experience. Thus, qualitative are often more concerned about uncovering knowledge about what people think and feel about particular events or phenomena that they are making judgments about whether these thoughts and feelings are valid.

Quantitative data can be analysed by the used of statistics. There are two broad types of statistics; descriptive and inferential statistics. Descriptive statistics are procedures that assist in organising, summarising, and interpreting data. Inferential statistics are procedures that allow us to make generalisations from sample data to the populations from which samples were obtained. Descriptive statistics include such simple statistical techniques as frequency distribution, measures of central tendency, dispersion etc. Inferential statistics include procedures such as Chi-square, analysis of variance (ANOVA), and multivariate analysis of variance and covariance (MANOVA).

Analysis of qualitative data is a bit more complex. This involves three concurrent flows of activity, namely data reduction, data display, and conclusion drawing (Miles and Huberman 1984). Data reduction refers to the process of selecting, simplifying, focusing, and transforming the raw data collected from the field research. Qualitative data can be reduced through selection, summary, paraphrase, and sub-gumptions of data in a large pattern or metaphor. Data display is the organised assembly of information that permits conclusion drawing. Looking at displays helps us to understand the situations or phenomena and to conduct further analysis. Data displays come in the form of descriptive or explanatory figures and matrices such as charts and tables. Conclusion drawing involves drawing meanings from reduced and displayed data. This takes the form of noting the meanings of specific regularities, patterns, themes, configurations and causal flows. In recent times, several computer-based qualitative analysis programmes have been devised to undertake the process described above.

4.0 CONCLUSION

This unit examined the general methods of scientific inquiry, exploring the methods of inquiry, data collection and data analysis. In recent times, several computer-based qualitative analysis programmes have been devised to undertake the process described in this unit.

5.0 SUMMARY

The main methods of inquiry, namely experiment and observation of every research have been detailed under this unit. The unit also explained why students of political science rarely undertake experiments. It noted that it is due to the complexity of political phenomena, especially the lack of regularity arising from indeterminacy and reactivity of political phenomenon.

6.0 TUTOR MARKED ASSIGNMENT

1. How can quantitative data be analysed using statistics?
2. What do you understand by quantitative data and qualitative data?
3. What is data?

7.0 REFERENCES/FURTHER READING

Adler, E. (1997). Seizing the Middle Ground: Constructivism in World Politics. European Journal of International Relations 3: 19-63.

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UNIT 5 LOGICAL PATTERNS OF EXPLANATIONS

CONTENTS

1.0 INTRODUCTION

This unit introduces the various patterns of explanation in political inquiry. It identifies the patterns and explains them in their various categories bringing out the qualities of each pattern and their usefulness in political investigation. The unit identifies about four patterns in this regard which include dispositional, intentional, rational, and genetic patterns. The unit further explains the possibility of adopting two or more patterns in a particular explanation which is a common phenomenon in Political Science.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- describe the patterns of explanation in political inquiry
- explain the various patterns of explanation in political inquiry.

3.0 MAIN CONTENT

3.1 Patterns of Explanation

There are six patterns of explanations in political science research. The first three, *dispositional*, *intentional*, and *rational*, employ human characteristics as independent variables. The others are macro-institutional, system maintaining, and genetic. It has become clear that a single criterion has not been used to classify patterns. For instance, dispositional explanations are distinguished from macro explanations

mainly by content, that is, the different types of concepts used as independent variables in their generalisations.

3.2 The Dispositional Pattern

The dispositional pattern in Political Science is so labeled because it uses dispositional concepts. A disposition is a tendency to respond in a certain way in a given situation. Included in the class of dispositional concepts are attitudes, opinions, beliefs, values, and personality traits. The dispositional pattern can be distinguished from the intentional pattern because the former makes no reference to conscious motives. In other words, the link between the disposition and behaviour is not "out in the open."

There are as many types of dispositional explanations as there are kinds of dispositions. However, there are several other dimensions according to which dispositional explanations can be classified. Dispositions may be attributed to individuals, decision makers, groups, and types of people, classes, nations, or all men. The law or relationships can be explicitly stated, consciously assumed, or unconsciously implied; and based on controlled analysis of statistical evidence, observation and experience, or commonsense speculation. A succinct statement of these dimensions can be made in a series of questions, the answers to which provide a clear categorisation of any dispositional explanation.

3.3 The Intentional Pattern

The existence of a dispositional pattern indicates that much political behaviour is not intentional. Still, there is a class of actions that seem to manifest such purposive behaviour. This is the basis for the inclusion of an intentional pattern. The term intention refers to all actions (not necessarily successfully carried out) that are consciously purposive. Political scientists often attempt to explain political phenomena by showing that the explanandum is the result of some intentional action.

Intentional explanations, like all other sound explanations, are nomological. They differ from the other patterns only in the type of concepts used and the way in which generalisations are arranged. Intentional explanation is a unique way of accounting for social phenomena - a method of explanation logically distinct from the *nomological* model. The basis of this position is a belief that citing of intentions explains by showing the meaningfulness of the behaviour in question. The explanatory force of learning the agent's intention depends upon the author's familiarity with intentional behaviour; the explanation must solve a puzzle and in order for the puzzle to exist there

must be a 'previous stock of knowledge and beliefs' with which the perplexing event is at variance."

3.4 The Rational Pattern

A rational-type of explanation is based on the presumed or demonstrated rationality of men. This pattern may be considered as a special case of intentional explanation in the most general sense. However, it is sufficiently distinct and wide enough in use among political scientists to justify separate consideration.

There is a general belief that people are rational insofar as they behave rationally. An action is rational to the extent that it is correctly designed to maximize goal achievement, given the goal in question and the real world as it exists. An individual is rational if his pursuit of goals is as efficient as possible. The importance of goals to rationality indicates what we could say at the outset of explanation in the most general sense. According to the definitions all rational behaviour is goal-seeking. The only difference between it and the intentional pattern is the claim that rational action is the best way to achieve a goal.

3.5 The Genetic Pattern

Out of the patterns of explanation we are discussing, the one that is the most distinctive structurally is the genetic pattern. The task of genetic explanations is to set out the sequence of major events through which some earlier system has been transformed into a later one." Thus, a genetic explanation does not fit the other schema because it involves several stages. It is clear that the factors in the schema occur at different times. This is why the genetic pattern is characterised by stages. Genetic explanation is marked by at least two explanation stages, each of which can be considered a separate explanation, which together show why a political phenomenon is as it is or was what it was. In other words, an explanation fitting the genetic pattern first explains a state of affairs X and then proceeds to explain, on the basis of X, another state of affairs, etc.

The genetic pattern accounts for the present state of a political phenomenon by showing how it developed over time from previous stages. It differs from other patterns because of this developmental element and the multiplicity of stages. From what we have said so far it seems reasonable to conclude that the genetic pattern is often identified with historical explanation. It is also interesting to note that much of the methodological analysis of the genetic pattern has been carried out by philosophers of history. Many of the explanations provided by Political

Scientists that can be classified as genetic are actually historical.
There are genetic explanations that are not historical in the technical sense, for instance, the explanation of the development of party identification. The main characteristic of many genetic explanations is a narrative style or chronicling of events. However, in accounting for a political phenomenon, not every antecedent event is relevant. We can say genetic explanations account for political phenomena by describing a series of relevant events, which in a chain-like fashion determine the state of the explanandum.

SELF-ASSESSMENT EXERCISE

Discuss in details genetic pattern of explanation.

4.0 CONCLUSION

At the end of this unit, it could be observed that patterns of explanation in political inquiry vary based on the concept being explained. These patterns have different structures even though some are structurally similar.

5.0 SUMMARY

This unit has explained the various patterns of explanation in political inquiry by identifying the major characteristics of each and their usefulness. It has also categorised them into various orientation based on the structure of these patterns.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain some patterns of explanation in political inquiry
2. Identify the various patterns of explanation examined in this unit
3. Critically assess the genetic pattern of explanation in political inquiry.

7.0 REFERENCES/FURTHER READING

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MODULE 4 CONCEPTS IN POLITICAL INQUIRY

INTRODUCTION

Module three dealt with the nexus between *logic* and *political inquiry*. It comprehensively treated complex links between logic and scientific research thereby introducing the students to the intricacies of project writing and other forms of political investigations. This module introduces the student to the different meanings and types of concepts that are used for political inquiry to further enhance their knowledge of research. The module examines the main concepts of political inquiry and generally explained their usefulness in scientific investigation. It further examines the central role of scientific concepts in political investigation and its various interpretations. The module is divided into five units to examine meaning and nature of concepts, theory, and importance of theory, model forms, importance of concepts, all in inter-related form while explaining their different roles to inquiry. The units are as follows:

Unit 1 The Meaning of Concepts
Unit 2 Theories in Political Inquiry
Unit 3 Functions of Theories in Political Inquiry
Unit 4 Models in Political Inquiry
Unit 5 Functions of Concepts in Political Inquiry

UNIT 1 THE MEANING AND NATURE OF CONCEPTS

CONTENTS

1.0 INTRODUCTION

This unit explains the meaning and nature of scientific concepts in political inquiry. It examines the definition of concepts generally and its

usefulness in scientific orientation. It further examines the central role of scientific concepts in political investigation and its various interpretations. The unit further explores the idea of philosophers on the meaning and the usefulness of the term concept to political inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- define the term concept
- discuss the abstractive notion of concept.

3.0 MAIN CONTENT

3.1 Meaning of Concepts in Political Inquiry

Simply, a concept is an abstract notion or idea, something that is not concrete. As noted by Theodorson and Theodorson (1969), concepts can be regarded as 'a word or set of words that expresses a general idea concerning the nature of something or the relations between things, often providing a category for the classification of phenomena'. A concept, therefore, is mainly a construct of the mind, an idea.

Thus, a concept is an abstract summary of characteristics that we see as having something in common. Concepts are created by people for the purpose of communication and efficiency. A concept has no set meaning and it is up to us to define what we mean by the concept. But if concepts have no set meaning then anyone can define a concept in any way that they wish. But if everyone can define the concept in any way they like the concept becomes worthless; unless there is agreement on the meaning communication is impossible. A concept therefore has to be defined, but in such a way that it has a degree of acceptance. Experts in the field usually propose such definitions. Asking a psychologist, philosopher, or a linguist what a concept is, is much like asking a physicist what mass is. An answer cannot be given in isolation. Rather, the term plays a certain role in a larger world-view that includes the nature of language, of meaning, and of mind. Hence the notion of a concept cannot be explicated without at the same time sketching the background against which it is set, and the 'correctness' of a particular notion of concept cannot be evaluated without at the same time evaluating the world-view in which it plays a role.

There is a fundamental tension in the ordinary language term concept. On one hand, it is something out there in the world; the Newtonian concept of 'mass' is something that is spoken of as though it exists

independently of whom actually knows or grasps it. Likewise, grasping a concept evokes comparison to grasping a physical object, except that one somehow does it with one's mind instead of one's hand. On the other hand, a concept is spoken of as an entity within one's head, a private entity, a product of the imagination that can be conveyed to others only by means of language, gesture, drawing, or some other imperfect means of communication.

A concept is a cognitive unit of meaning – an abstract idea or a mental symbol sometimes defined as a "unit of knowledge", built from other units which act as a concept's characteristics. A concept is typically associated with a corresponding representation in a language or symbology such as a single meaning of a term.

3.2 Theories of Concept

There are prevailing theories in contemporary philosophy, which attempts to explain the nature of concepts. The representational theory of mind proposes that concepts are mental representations, while the semantic theory of concepts holds that they are abstract objects. Ideas are taken to be concepts, although abstract concepts do not necessarily appear to the mind as images as some ideas do. Many philosophers consider concepts to be a fundamental ontological category of being. The meaning of "concept" is explored in mainstream cognitive science, metaphysics and philosophy of mind. The term "concept" is traced back to 1554-60 (latin conceptum – something conceived) but what is today termed "the classical theory of concepts" is the theory of Aristotle on the definition of terms (Nwachukwu, 2014).

John Locke's description of a general idea corresponds to a description of a concept. According to Locke, a general idea is created by abstracting, drawing away, or removing the common characteristic or characteristics from several particular ideas. This common characteristic is that which is similar to all of the different individuals.

In the same tradition as Locke, John Stuart Mill stated that general conceptions are formed through abstraction. A general conception is the common element among the many images of members of a class. "... [W]hen we form a set of phenomena into a class that is, when we compare them with one another to ascertain in what they agree, some general conception is implied in this mental operation". Mill did not believe that concepts exist in the mind before the act of abstraction. "It is not a law of our intellect, that, in comparing things with each other and taking note of their agreement, we merely recognise as realised in the outward world something that we already had in our minds. The

conception originally found its way to us as the result of such a comparison. It was obtained (in metaphysical phrase) by abstraction from individual things".

By contrast to the above philosophers, Immanuel Kant held that the account of the concept as an abstraction of experience is only partly correct. He called those concepts that result of abstraction "aposteriori concepts" (meaning concepts that arise out of experience). An empirical or an aposteriori concept is a general representation (Vorstellung) or non-specific thought of that which is common to several specific perceived objects. A concept is a common feature or characteristic. Kant investigated the way that empirical aposteriori concepts are created (Nwachukwu, 2014).

SELF-ASSESSMENT EXERCISE

What is the importance of Concepts in scientific investigation?

4.0 CONCLUSION

At the end of this unit, students are expected to understand the meaning of concepts, their usages and importance in political inquiry. They should also be able to analyse the theories of the nature of concept as a representation of mind and as semantics. Their ability to differentiate between these two should be displayed without any difficulty.

5.0 SUMMARY

While it is difficult to define the term concept, we have tried in this unit to explain the various definitions of the term as offered by philosophers and the usages of the term. Also, this unit has analysed the usefulness or importance of the term concept and its nature and theories as espoused by scholars like John Locke, John Stuart Mill, Immanuel Kant and others.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the meaning of concept.
2. What is the usefulness of concept in political inquiry?

7.0 REFERENCES/FURTHER READING

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UNIT 2 THEORIES AND POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the meaning and development of theory in Political Science. The unit explores the similarity between theory and models in political analyses and explains their usefulness. It analyses the importance of theory to political analysis and investigation and shows how to build a theory for political investigation.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- state the meaning of theory in political inquiry
- discuss the usefulness of theory in political investigation.

3.0 MAIN CONTENT

3.1 The Notion of Political Theory

When a hypothesis has survived a sufficient number of tests, it may be promoted to a scientific theory. A theory is a hypothesis that has survived many tests and seems to be consistent with other established scientific theories. Since a theory is a promoted hypothesis, it is of the same 'logical' species and shares the same logical limitations. Just as a hypothesis cannot be proven but can be disproved, that same is true for a theory. It is a difference of degree, not kind.

Arguments from analogy are another type of inductive reasoning. In arguing from analogy, one infers that since two things are alike in several respects, they are likely to be alike in another respect. This is, of course, an assumption. It is natural to attempt to find similarities

between two phenomena and wonder what one can learn from those similarities. However, to notice that two things share attributes in several respects does not imply any similarities in other respects. It is possible that the observer has already noticed all of the attributes that are shared and any other attributes will be distinct. Argument from analogy is an unreliable method of reasoning that can lead to erroneous conclusions, and thus cannot be used to establish scientific facts.

It is useful to begin an analysis of scientific political theory with two distinctions. The first distinction points out that the political theory now under consideration is not the same as that venerable activity that often goes by the same name but which in some cases is labeled political philosophy. Let us recall the normative character of political philosophy, its emphasis is on ought questions. What should be the goals of the political system? What is the best political system?

These activities can be contrasted with the scientific-empirical nature of political theory, which has to do with its questions. Confusion arises from the traditional interchangeability of political philosophy and political theory. While an ever-increasing number of Political Scientists are accepting one form or another of the distinction just mentioned, the confusion lingers. This is attributable not so much to the failure of Political Scientists to understand the nature of scientific theory, although this is one source of difficulty, as to the continued substitution of theory for philosophy, based on the unquestioned assumption that the two refer to the same activity.

A second distinction is often made between theory and practice. As manifested in the popular statement “That’s fine in theory, but it won’t work in practice,” it assumes that theory or theoretical thinking is false or unrealistic. However, it should be noted that there is no divorce in the above sense between theory and practice. Rather than being unrealistic or false, a sound theory is the basis for reliable knowledge of politics. Theories help us explain and predict political phenomena, and ultimately help us to make well-founded, practical decisions (Bamisaye and, 2009).

Another related and more sophisticated interpretation of the “theory versus practice” distinction views the former as the result of speculation. Its key phrase is, “That’s fine in theory, but will it work in practice?” The distinction is still a fundamental one, but theory is given a higher status. Now, at least, a theory is not necessarily false, for according to this interpretation it is an elaborate hypothesis, a set of guesses to be tested. Thus, to be theoretical is to be hypothetical, potentially true. While this view is more generous than the first, it is misleading.

3.2 The Nature of Political Theory

There are variations that are popular among Political Scientists on the nature of political theory. Quentin Gibson gave a basic definition of theory as "Sets or systems of statements logically inter-connected in various complex ways". In a similar vein, Nelson Polsby et al wrote that, "A scientific theory … is a deductive network of generalisations from which explanations or predictions of certain types of known events may be derived". The simplest interpretation of theory views it as set of related empirical generalisations.

Therefore, several generalisations about a particular area of politics can be classified as a theory. Take, for instance, the laws derived from voting studies. Since each law describes the relationship between a social, economic, political, or psychological variable and a type of voting act (men tend to vote more than women), the conjunction of several can explain voting behavior in a more general way. It is an attempt to relate a number of generalisations from the literature of party behavior and organise them into a systematic theory.

The notion of political theory as a collection of empirical generalisations about a particular field or subject is a popular one among many Political Scientists. To others it represents a simplified version of the interpretation of theory that is more commonly accepted by the scientific community at large. According to this interpretation, a theory is characterised by the use of theoretical constructs. Thus, a theory might be defined as "a set of generalisations containing concepts we are directly acquainted with and those that are operationally defined; but, more importantly, theoretical concepts that, although not directly tied to observation, are logically related to those concepts that are.' This provides the basis for a distinction between theories and empirical generalisations. While the latter can be empirically tested (confirmed or rejected), because their concepts are directly tied to observation, we can't test in the same way a generalisation that contains theoretical (or, by definition, no observable) concepts. However, this is not to say that theories cannot be tested and evaluated (Osuala, 1985).

Despite their characteristic use of theoretical concepts, sound theories are empirical. Hence, it is believed that a scientific theory has two features i.e. structural, and substantive; one referring to the relationship between its concepts, the other to its empirical content. Any scientific theory may be conceived of as consisting of an un-interpreted, deductively developed system and of an interpretation which confers empirical import upon the terms and sentences of the later. It can begin with a purely formal logical system such as Euclidean geometry, where

concepts are implicitly or internally defined, and then directly define (tie to observables) some of its concepts. This would then give the other concepts, labeled theoretical, indirect empirical import. There is a difference between an un-interpreted mathematical or logical system and a scientific theory, and the difference is the empirical nature of the latter.

4.0 CONCLUSION

It is obvious that scientific inquiry of political phenomena will not be possible without the construction of theory. This stems from the formulation of hypothesis and law. Therefore, theory construction is a common phenomenon in establishing the scientific orientation of Political Science.

5.0 SUMMARY

In this unit, we have tried to explain the meaning of theory as well as establishing its uses in political inquiry. Also, this unit has analysed the heuristic value of theories to the understanding of the science of political inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. examine the role of theory in political investigation.
2. What is Theory?

7.0 REFERENCES/FURTHER READING

Brodbeck, M. (1959). *Models, Meanings, and Theories*. In Leonard Gross (Ed.). Symposium on Sociological Theory, Evanston, III: Row, Peterson.

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UNIT 3 FUNCTIONS OF THEORIES IN INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the functions of theory in Political Science. It analyses the various functions as performed by theory in political investigation bringing to fore the role of theory in the analysis of concept formation and introduction. It also explains the place of theory in Political Science discipline as a whole and how this affects orientations in political inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- list and explain the functions of theory in Political Science
- state how to construct theory for political analysis.

3.0 MAIN CONTENT

3.1 Analysis of Theory

Since theories are empirical, they can be evaluated according to their soundness. A close analysis of a proposed theory should indicate whether it is properly constructed and empirically based. But perhaps a more fruitful approach to the nature of scientific theory is through an examination of the functions it performs. One way to evaluate a theory is to determine how well it is doing what it is expected to do. Several comments have suggested that a theory's major function is importantly to explain singular facts and occurrence, but perhaps more importantly to explain empirical generalisations. This latter function is what gives the scientific theory its power.

Generally, a theory can explain empirical generalisations because it is more general, more inclusive than they are. The great power of Newtonian mechanics, demonstrate over the centuries, is based upon the ability of a rather small set of theoretical laws to explain a great number of empirical laws about bullets, missiles, and other moving objects.

The same situation exists in Political Science, although it is misleading to talk about an existing theory of politics (in the second, more sophisticated sense of theory). Let us suppose that general stimulus-response learning theory can explain a wide range of empirical laws, all the way from the voting behavior of individuals to the military activity of nation-states. The point is that if learning theory were a sound theory of political behavior, a set of general laws using such theoretical concepts as "demand" and "habit" would explain or imply a number of generalisations that previously had appeared to be independent, or at least not closely related.

This implies that in one sense a theory is not to be judged true or false, but more or less useful as an explainer of empirical laws. Since laws describe our knowledge in a particular field, the sound theory explains the knowledge more generally and completely, indicating to use the interconnection between seemingly isolated facts. In taking this position, the controversy that exits among philosophers of science over the status of theories cannot be overlooked. Some say they are true or verified in the sense that empirical laws are. That is, they are real descriptions of the world of observation.

This position, usually labeled the realist, recognises no local or philosophical distinction between theoretical and non-theoretical concepts, since they both refer to real entities. The opposing school of thought, the instrumentalist, takes another position closer to one we adopted in the last paragraph. It argues that there is no point in trying to determine whether a theory is true or false, since it is neither. It does not describe the world, but explains or predicts worldly phenomena.

A theory is tested according to how well it performs its major functions; thus, the label "instrument." This is close to our notion of theory. However, the strict instrumentalist's complete rejection of the realist theories is questionable. While a theory contains theoretical concepts, it is also tied to observation through an empirical interpretation. Thus, it more or less describes the world. The theoretical concepts fill in the gaps and allow the theory to explain in more general terms what has been explained by individual empirical laws.

3.2 Functions of Scientific Theories

Scientists use theories to organise, systematise, and coordinate existing knowledge in a particular field. According to the first notion of theory, a set of related empirical generalisations, a theory is systematisation. A theory of voting behaviour would be a set of relevant generalisations that have been collected and put into logical juxtaposition. According to the higher level notion of theory, a theory organises as it explains. As several diverse generalisations are accounted for by the theoretical propositions of the theory, they are also related and made parts of a system of knowledge.

Theories explain and organise existing knowledge. They also suggest potential knowledge by generating hypothesis. A theory can, on the basis of its highly abstract generalisations, often predict an empirical generalisation – predict that a particular relationship holds. The hypothesis can then be tested and accepted or rejected. Thus, in addition to its explanatory and organisational functions, theory has a heuristic one – to suggest and to generate hypotheses.

3.2 The Place of Theory in Political Science

In determining the role of theory in Political Science, we ought to remember the two notions of theory, for a different conclusion may be arrived at in regard to each. The first question is: “Do we have any scientific theories in political science?” From what has been said in this unit, the answer would appear to be no, if we are talking about the higher – level notion of theory. But if this is the case, is there any point in talking about theories? There are probably other mythological topics more significant to contemporary Political Scientists. While, because of limited resources and time, there is some wisdom in this position, it is perhaps too restrictive. For even without a sound scientific theory in hand, the Political Scientist is not wasting his time if he takes an interest in theory-construction.

If “theory” means a collection of empirical generalisations, then our answer to the original question about the existence of political theories can be more generous. For there are theories, or at least near-theories, of certain kinds of political behavior considering our knowledge of voting behaviour. The collection of laws can serve as the foundation of an abstract theory. The collected laws of voting behavior can be classified as a near-theory. In any case, the condition of theory in political science is not as bleak as it might appear, although at this point in the discipline’s development the political scientist’s time and effort might be more profitably spent on pre-theoretical activities.

SELF-ASSESSMENT EXERCISE

Examine the place of theory in Political Science.

4.0 CONCLUSION

While it is discernible to stress that theory plays a vital role in any scientific investigation, it is also important to explain that theory construction has to do with socio-cultural environment of the builders and the users. In most cases, scholars examine event in their peculiar environment to construct theory, which may and may not be applicable in other environments. This explains the heuristic value of theory in explaining political phenomena based on scholar's orientation.

5.0 SUMMARY

After reading this unit, it would be observed that we have explained the functions of theory and its place in political investigation in particular and Political Science in general. The unit has also explained the relationship of the environment to the construction of theory.

6.0 TUTOR-MARKED ASSIGNMENT

1. Critically examine the place of theory in Political Science investigation.
2. Identify and explain the functions of theory in Political Science.
3. Explain the factors to be considered in constructing a veritable theory.

7.0 REFERENCES/FURTHER READING

Brodbeck, M. (1959) *Models, Meanings, and Theories*, in Leonard Gross (ed.) Symposium on Sociological Theory, Evanston, III: Row, Peterson.

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UNIT 4 MODELS IN POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the basic application of models to political analysis and the possibility of misusing models. The unit also explains other available devices in the explanation of political analysis and investigation. The unit further explores the orientations of various scholars in building models for political analysis and the extent to which these models are realizable or unrealisable in Political Science arena.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- discuss the various usages of models for political analysis
- identify various ways by which models can be misused
- state the analysis of models as constructed by scholars.

3.0 MAIN CONTENT

3.1 Defining Model

The technical or the professionally acceptable meaning of model is based on the notion of isomorphism, which refers to the similarity between one thing and another (its model). More technically, isomorphism requires the followings; “there must be a one-to-one correspondence between the elements of the model and the elements of the thing of which it it’s the model, and that “certain relations are preserved”. Models of this sort are found in all areas of life (for instance, scale-model airplanes); in science, the isomorphism is usually

thought to hold between two theories, or more explicitly, their laws. This is what we will take as the core meaning of model.

This type of model - an isomorphism between two empirical theories - is nonexistent in Political Science; the reason is the lack of any sound scientific theories of politics. However, following May Brodbeek, we can mention another notion of model that also involves *isomorphism*, the time between an empirical theory (in the sense of a set of empirical generalisations) and a set of purely arithmetical truths. If this is the case, then the latter is called an arithmetical representation of the empirical theory. This meaning may be more relevant to Political Science, largely because of the increasing use of game theory, which is an "arithmetical representation."

3.2 Contentions over Models in Political Inquiry

The argument begins with the realisation that those Political Scientists who construct models often characterised them as unrealistic or idealised. This seems to be the most popular use of model or conceptual scheme in Political Science (although it diverges from the more technical meaning). While asserting its idealised nature, the Political Scientist will often attempt to use his model to explain phenomena. Or more accurately, the creator of a model realises its limitations as an explanatory device, while those who come after and use the model for their own purposes are prone to make more extravagant claims about its explanatory usefulness. These claims, in their extravagance, are unfounded.

The fact is that the function of models is not to explain. Let us first consider arithmetical representations. Our primary example will be game theory, since it is one of the most popular and promising models in Political Science. Game theory is arithmetic because it defines rationality - maximising one's gains and minimising one's losses - in terms of probability calculus and set theory. It is supposedly isomorphic because the Political Scientist attempts to connect it to laws about political behavior. In this regard, Anthony Downs has provided a model of party politics, William Riker has provided a model of coalition formation, and L.S. Shapley and Martin Shubik have provided a model of power in a committee system.

However, the trick for the social scientist is to find appropriate descriptive terms which when coordinated to the arithmetical ones result in true empirical laws of human behavior. We would argue that, thus far, the confirmed empirical laws have not been discovered. But more importantly, the model-builders usually admit their model as unrealistic.

For instance, Anthony Downs say of his model of rational decision-making, “The model is not attempt to describe reality accurately. Like all theoretical constructs in the Social Sciences, it treats a few variables as crucial and ignores others, which actually have some influence. Notice that beside the model’s isomorphic nature (not obvious from this quote) there is reference to idealising and abstraction. While admitting that his model is unreal, Downs claim that, “it proposes a single hypothesis to explain government decision making and party behavior in general. At another point, he argues, “Theoretical models should be tested primary by the accuracy of their predictions rather than by the reality of their assumptions. Our criticism of this argument rejects the explanatory power of models. In admitting that his model is ideal, unreal, and so forth, Downs has articulated its inability to explain political phenomena. Constructing a theory of rational behavior and then stating that no one really behaves rationally undercuts the model’s explanatory value.

Furthermore, models such as game theory contain idealisations referring to concepts like “rational political behavior”. Insofar as they are unreal - because they leave out variables - they cannot explain. May Brodbeck have said of such ideal types in economic, “The better the theory, the more knowledge we have about the conditions under which the neglected variable do or do not make a difference. If there are no economic men or if the ideal type of capitalism does not exist, and then certain suggested theories are false. Calling the models will not make them truer”. This is the heart of the matter; the formulators of such models often use them as if they were theories; in other words, they confuse models with theories (Brodbeck, 1959).

The truth is that idealised concepts, which are admittedly unreal, cannot be equated with theories that contain theoretical concepts. A theoretical concept is so labeled, not because it is divorced from reality, but because it is derived from observational terms within a theory. Theoretical notions cannot be understood apart from the particular theory that implicitly defines them. Furthermore, to be explanatory, such a theory must have some empirical content, so that the theoretical constructs are linked, at least indirectly, to observational phenomena. The theoretical concepts are non-empirical, idealised, or admitting unreal, but instead, they are not observable; they fit within the empirical theory.

Thus, we see that a model (in the idealising sense) is not an empirical theory. Idealised concepts are not equivalent to theoretical concepts. Insofar as they are ideal they are unreal. The empirically sound theories refer to experience; thus, they can explain experience. If a mathematical model is truly isomorphic with a segment of political phenomena, it will

have empirical referents, and so be able to explain; at this point, it becomes a theory. The fact remains that models, as they are usually construed by Political Scientists, do not explain as theories can; this includes both notions of theory - a set of related observational-empirical laws, or a set of theoretical laws.

But, in criticising the assumption that models in Political Science explain, we have not meant to detract from their overall scientific value. Models such as game theory can be of heuristic value. It is not difficult to see how. If the Political Scientist is trying to accumulate basic knowledge in his field, it probably helps to have something available that stimulates his imagination and sharpens his insight. It is probably not an exaggeration to say that in Political Science, such stimulation and sharpening is necessary. Some models admirably perform these functions. If the model is a simplified interpretation of reality, the researcher is forced to consider what the situation would be like if the model did describe reality and to what extent the model is unreal. If the model is based on a formal theory such as game theory, there is a host of relationships suggested that can be tested. If a model of politics is based upon a structure or theory in another area, a biological model for instance, the researcher has a potentially rich supply of hypotheses generated as he compares his field with the other.

The distinction between the explanatory and heuristic value of theories and models is based upon the more fundamental distinction between scientific justification and discovery. Throughout the analysis of the nature of generalisations, explanation, and the function of theories in political inquiry, we have been dealing with scientific justification, the relationship of evidence to hypotheses. As we have seen, this is amenable to logical analysis. There are methods of distinguishing between a good and a bad explanation or no explanation at all, between a sound or unsound theory, and between an acceptable and unacceptable generalisation (Young, 1958).

Scientific discovery, on the other hand, has to do with where the concepts, hypotheses, and theories come from, how the scientist conceives of them. This deals with the psychology of scientists and is an activity that emphasises creativity, imagination, even genius. Therefore, it is a more difficult process to analyse; so difficult that some have concluded it is possible. Donald Schon, in writing about those who have studied the subject of innovation in science, notes that their “theories on the subject fall into one of two categories: either they make the process mysterious and therefore, intrinsically unexplainable; or they regard novelty as illusory and, therefore, requiring no explanation. However, since models are an integral part of the process of discovery, and since models can be analysed, certain aspects of the process can be analysed.

3.3 Model-Building in Political Science

There is a kind of model-building in Political Science that is seemingly remote from isomorphic analysis. It is characterised instead by idealised sets of assumptions about given areas of political phenomena. As implied, this activity is perhaps the most prevalent of those that go under the name of model building. Less elaborate models, of party systems, are analysed by Samuel Eldersveld. He clearly uses them in a heuristic fashion to suggest relationships that can be tested. This use of ideal models can be traced back to German Sociologist Max Weber's notion of ideal types. In his studies of Bureaucracy, Weber found that if he began with an idealised or perfect concept of bureaucracy, he could use it as a standard to compare real world bureaucracies. By "idealised" Weber meant "intentionally unreal." Likewise, the ideal models of modern political scientists are not meant to be of reality but useful heuristic devices.

As already implied, some Political Scientists call the kind of model discussed a "conceptual scheme." The term seems to imply a set of ideal assumptions about a given subject area. Thus, William C. Mitchell has said in introducing his own "structural-functional" conceptual scheme that a conceptual scheme or framework is an essential tool in all ideas, and directives that guide the selection and interpretation of facts. Again, models or conceptual schemes are more important for their suggestiveness than their explanatory power.

SELF -ASSESSMENT EXERCISE

Identify the various misuses of models in political inquiry

4.0 CONCLUSION

After reading this module, students should be able to understand the meaning of models in Political Science. They should be able to identify the functions of model in political inquiry. They should also be able to understand the uses and misuse of model in Political Science generally.

5.0 SUMMARY

In this unit, we have explained the meaning and use of models in political inquiry. We have also established the relationship between theory and models in political inquiry and identified its importance in Political Science investigations.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define a theory.
2. Explain the relationship between theory and model.
3. Identify and explain other heuristic devices in political inquiry.

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UNIT 5 FUNCTIONS OF CONCEPTS IN POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit explains the basic functions that concepts perform in political inquiry or any scientific investigation. It explores the three interwoven functions of concepts in scientific investigation and analyses their usefulness. This is done with basic examples of each of these functions. This is not to say that there cannot be other functions being performed by concepts but these three are what concern students in this course.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain the functions performed by concepts in political inquiry
- analyse their usefulness in political inquiry
- discuss other functions of concepts.

3.0 MAIN CONTENT

3.1 Functions of Scientific Concepts in Political Inquiry

Concepts are used to describe political phenomena. More can be said about the descriptive qualities of concepts than that they are used to identify political phenomena. In other words, there is more to description than identification. For any serious orientation and development of scientific activities in Political Science, scientific concepts perform more function than definition and identification. Concepts can also be used to classify, compare and measure. More

specifically, concepts perform classificatory, comparative and quantitative functions.

3.2 Classificatory Function of Concept

Some concepts provide the basis for classification – the placing of political actions, systems, or institutions into classes or categories. As is true of science generally, classificatory concepts have commonsensical basis. A substantial portion of our everyday thinking is spent classifying, arranging, and sorting out phenomena that confront us. This is a primary method for making sense out of the word. Similarly, it is the way the scientist begins his scientific analysis.

The scientist sharpens the classificatory apparatus of common usage. Instead of characterising all nations as Communist or Pro-American, as the average person is inclined to do, the Political Scientist might formulate a concept of democracy and then classify all political systems as either democratic or non-democratic. This is an example of dichotomous classification, the simplest variety. It involves defining a concept, *democratic*, according to the scientific procedures already outlined, linking it to observables, such as "number of political parties and their rate of turnover" or "ratio between total adult population and eligible voters" and then treating it as a characteristic of political systems, placing all systems that have the characteristic in one slot or category, and all those that do not in another. A dichotomy is thus created because there are only two categories according to this classificatory concept. If the concept has been soundly defined and is applicable to the population being considered, then the classification will be exhaustive.

Some variables seem to be naturally dichotomous. We assume that people either right-handed or left-handed and, therefore, it should be easy to formulate a dichotomous concept that describes this characteristic. Likewise, it makes sense to assume that in any democratic political system, everyone is either a democrat or non-democrat. While this line of thinking is commonsensical true, it overlooks the possibility that what appear to be either-or concepts are actually situations that allow for gradations and additional categories; we know that there are ambidextrous people i.e. people who can use their left hand as skillfully as they can use their right hand. This is why, for instance, in most studies of political-party identification, and voting behaviour, the population is broken down into the categories of Weak Democrat, Strong Democrat, Independent, and so forth.

3.3 Comparative Function of Concept

A comparative concept is a more complex and useful type of classificatory concept. The members of a population are sorted out and placed in categories; but in addition, because the categories represent a particular property, the members are ranked according to how much of the property they each have. For instance, we might want to compare those nations that are very democratic, those nations that are moderately democratic, and those nations that are much less democratic. This would be done by categorising the empirical referents of democracy. Those political systems that fall in the upper one third of a list of ratios of total eligible voters to total population would be classified as very democratic. So, we could say that a nation placed in the first category is *more* democratic than those placed in the second or third categories.

In fact, a sophisticated comparative concept (such as "hardness" in geology, or "power" in Political Science) will allow us to compare every member of population (whether a collection or rocks or a group of politicians) with every other member; thus, practically speaking, the number of categories is theoretically infinite, practically limited only by the number of members of the population. The result of this analysis is a rank order of items, of every item – of more or less democratic nations, or more or less powerful senators, or of harder or softer rocks. In every case, the advantage of the comparative over the classificatory concept is based upon the additional knowledge produced by the fine distinctions of the concept and the fact that the question is not either-or, but more or less.

3.4 Quantification Function of Concepts

Furthermore, concept can be used to quantify. Take a population that has been ordered by a comparative concept; then give the concept certain mathematical characteristics so as to allow one to say not just "Senator John is more powerful than Senator Lane", but "John is twice as powerful as Lane". A quantitative concept has been formulated. Our rank order of senatorial power tells us nothing about how much more powerful one senator is than another. This gets to the very nature of the comparative concept and is its basic limitation. More significant to the Political Scientist interested in more reliable knowledge of politics is the development of concepts that allow us not only to rank items on a particular characteristic, but also allow us to say something about how much of the characteristic each item has. And if "how much" is the question, we have to perform certain mathematical operations that are impossible when classificatory or comparative concepts are being used; thus, the use of the label "quantitative".

There are really two levels of quantitative concepts. The first, and less rigorous, is usually introduced into our scientific language in the form of an *interval* scale. In this case we can think of a scale as a device for ordering items. An interval scale has the additional feature of equal intervals between its categories. A good example of an interval scale we are all familiar with is the thermometer. Thus temperature is a quantitative concept measurable on an interval scale. The distance between, say, 30o and 40o Fahrenheit is equal to the distance between 40o and 50o and so on. But notice that it is not the case that 60o is twice as warm as 30o. The significant fact about an interval scale is that we can quantitatively compare (carry out certain kinds of mathematical operations on) the intervals between items on the scale, but not the items themselves. This is attributable to the interval scale's lack of an absolute zero, or point of origin.

SELF-ASSESSMENT EXERCISE

Analyse the quantification function of concepts in political inquiry.

4.0 CONCLUSION

After reading this unit, students should be able to understand the meaning of concepts and its usefulness in political inquiry. They should also be able to understand how to form concepts for political investigation and the introduction of such concepts for purpose of clarity and understanding to a layman. In addition, students should also be able to understand the functions of concepts in political inquiry.

5.0 SUMMARY

This unit analysed the usefulness of concepts to scientific inquiry and the ways by which concepts can be formed and introduced in political inquiry. It also explained the functions of scientific concepts in political inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe the classificatory function of concept in political inquiry.
2. Critically examine the comparative function of concepts in political inquiry?
3. Discuss the usefulness of quantification of concept in political inquiry.

7.0 REFERENCES/FURTHER READING

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MODULE 5 TECHNIQUES FOR DATA GENERATION

INTRODUCTION

The last module (module 4) examined the different types of concepts that are used for political inquiry thereby enhancing the knowledge of the students on political science research methodology. This module (module 5) examines the *steps*, *techniques* and *styles* involved in initiating political investigation i.e. sourcing and gathering data for research in political science. This module is "working the talk". Therefore, in this module the students particularly the final year students writing their projects are taken through the practical steps in carrying out political research. The module is structure into five units comprising methods of data gathering which include; questionnaire method; interview method; participant observation method; documentary/ content analysis method and hypothesis testing in inquiry.

Unit 1 Data and Political Inquiry
Unit 2 The Questionnaire Method
Unit 3 The Interview Method
Unit 4 Participant/Observation Method
Unit 5 Documentary/Content Analysis Method

UNIT 1 DATA AND POLITICAL INQUIRY

CONTENTS

1.0 INTRODUCTION

This unit introduces you to the importance of data gathering in any scientific inquiry, particularly political science research. It explores the need for collection of data in order to be able to provide adequate

analysis of social issues and political phenomenon. It underscores the basis of selecting a subset of the subject matter for analysis and on the basis of that making generalisation based on the results derived from the sample selected.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- discuss data gathering in political inquiry
- explain the usages of data in political inquiry.

3.0 MAIN CONTENT

3.1 What is Data?

This perhaps is the most fundamental aspect of research in the Social Sciences, as in other fields of study. Since social research has as its primary objectives as the understanding of social life by discovering new facts, documenting or rejecting old ones, tracing sequences and connections between events, and formulating generalisations concerning interrelationships, data collection becomes inevitable. Consequently, the fact of data collection needs to be mastered, because it constitutes a major factor in determining the validity of research findings and the essence of the scientific inquiry itself.

Data collection can be defined as “the science and art of acquiring information about sampled units that are likely to be of interest”. It is the process of obtaining relevant information regarding the major idea in a study. Data are not just collected for collection sake but they are gathered regarding the major idea in the study. Since data gathering is a primary efforts aimed at understanding social life through discovering of new facts, documentation of old ones or its rejection and also trying to establish relation between variables.

Sound measurement is not only simply a matter of careful concept explication followed by selection of statistical model, which minimise error, but the quality of data is inextricably tied to the methods and techniques used for generating data. There is no amount of sophistication with statistical manipulation that can fully overcome deficiencies inherent in data generated by an inappropriate instrument. Today, survey research is a frequently used mode of observation in the social sciences. In a typical survey, the researcher selects a sample of respondents and administers a standardised questionnaire to them or conduct interview for them.

3.2 Data Collection

A critical element for political inquiry is the actual research process employed in seeking answers to questions. In the essence this process consists of data gathering. Data thus collected in any inquiry provide information about some object usually called “unit analysis”. The political science techniques of data gathering are classified into document analysis, observation, interviewing and experimentation-simulation.

3.3 Data Analysis

Data collected for any inquiry collected or generated must be analysed in order to interpret their meaning for the problem under investigation. Hayes and Ronald (1970) notes that meaningful data improperly analysed are as great an impediment to the advancement of knowledge as are meaningless data. Valid data and proper analysis are both essential to the orderly expansion of knowledge.

Analysis therefore is the process of imparting meaning to data by interpreting them. Data analysis consists of a number of individual steps, including data manipulations, significance evaluation and data presentation. Usually before analysis of data collected the interpretation of data must be planned. The specific operations used in analysis of data include creating frequency distribution, percentage tables, pie chart, pie chart, bar graph and a sophisticated mechanical and electronic equipment like computer.

3.4 Data Interpretation

It is one thing to analyse and it is another task to interpret the data. Data interpretation is more or an less the last step in a research procedure to finding solution to the problem under investigation. The analysis of data leads to comments by the investigators on the reliability of the testable hypothesis or hypotheses under investigation. After the interpretation of the data collected the working procedure can be replicated. This is necessary to be able to make a firm conclusion that would be bias free. That is the investigators would briefly go over all the steps aforementioned. This is necessary to detect some working errors.

SELF-ASSESSMENT EXERCISE

Define data and differentiate data analysis and interpretation.

4.0 CONCLUSION

After reading this unit, student should be able to understand the meaning of data and importance of data collection. They should also be able to identify the various techniques available to researcher in the social sciences. Also, students should be able to identify the processes of data assessment which researchers must adhere to in order to have a good result from their inquiries.

5.0 SUMMARY

In this unit, we have explained the meaning of data and explicitly analysed the importance of data collection to political inquiry. The unit has also examined the process of assessment of data in order to produce a required result from any political inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is data?
2. Discuss in details data analysis and data interpretations.
3. Explain the importance of data to political inquiry

7.0 REFERENCES/FURTHER READING

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UNIT 2 QUESTIONNAIRE METHOD

CONTENTS

1.0 INTRODUCTION

This unit explains the meaning of the questionnaire method as a data collection instrument in the Social Sciences. It explains the uses of questionnaire method and the meaning of open-ended and close-ended types of questionnaire. The unit also explains the steps to be taken in designing a good questionnaire and the advantages and disadvantages of the questionnaire method for political inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- explain the use of questionnaire as a method of data collection
- distinguish between open-ended and close-ended types of questionnaire
- outline the steps in designing a good questionnaire.

3.0 MAIN CONTENT

3.1 The Questionnaire Method

A questionnaire is an instrument specifically designed to elicit information that will be useful for analysis. Questionnaire provides the best opportunity for the collection of data, especially when administered appropriately. A questionnaire normally contains a set of questions, the answers to which may constitute part of, or the main data required in a research. In design, a questionnaire may be arranged into several sections, each aimed at specific or group of information. Normally, a heading, identifying the source of the question is needed, for example,

Department of Political Science, National Open University of Nigeria, Lagos study center. This will be followed by a brief explanation of the use(s) to which the information will be put, and possibly an assurance of anonymity where necessary.

The body of the questionnaire may be arranged into questions A, B, C etc., with A soliciting information on personal data, for example, sex, age, marital status, name (where unavoidable) and B asking for information on social status, for example, income, position in societal hierarchy etc.

The design of a questionnaire must reflect the type of contact that it will make with respondents, and type of information requested for. Self-administered questionnaire is much more preferable to mailed questionnaire. Although some of the specific points to follow are more appropriate to structured questionnaires than to the open-ended questionnaires used in qualitative, in-depth interviewing. The underlying logic is valuable whenever we ask people questions in order to gather data.

Although the term questionnaire suggests a collection of questions, an examination of a typical questionnaire will probably reveal as many statements as questions. This is not without reason. Often, the researcher is interested in determining the extent to which respondents hold a particular attitude or perspective. If you can summarize the attitude in a fairly brief statement, you can present that statement and ask respondents whether they agree or disagree with it. Rensis Likert greatly formalised this procedure through the creation of the *Likert scale*, a format in which respondents are asked to strongly agree, agree, disagree, or strongly disagree, or perhaps strongly approve, approve, etc.

Both questions and statements can be used profitably. Using both in a given questionnaire gives you more flexibility in the design of items and can make the questionnaire more interesting as well.

3.2 Open-Ended and Close-Ended Questions

There are two options in asking questions. They can ask open-ended questions, in which case the respondent is asked to provide his or her own answer to the question. For example, the respondent may be asked, “What do you think is the problem with Nigeria’s electoral system?” and be provided with a space to write in the answer (or be asked to report it verbally to an interviewer).

In the case of closed-ended questions, the respondent is asked to select an answer from among a list provided by the researcher. Closed-ended

questions are very popular in survey research because they provide a greater uniformity of responses and are more easily processed than open-ended ones. Open ended responses must be grouped before they can be coded for computer analysis processing. The grouping process requires the researcher to isolate and aggregate similar responses and code them. The coding process often requires the researcher to interpret the meaning of responses, opening the possibility of misunderstanding and researcher bias. There is also a danger that some respondents will give answers that are essentially irrelevant to the researcher's intent. Closed-ended responses, on the other hand, can often be transferred directly into a computer format.

3.3 Advantages and Disadvantages of Questionnaire

The main shortcoming of closed-ended questions lies in the structuring of the responses. When the relevant answers to a given question are relatively clear, there should be no problem. In other cases, however, the structuring of responses may overlook some important responses. In asking about "the problem with Nigeria's electoral system," for example, checklist of issues might omit certain issues that respondents would have said were part of the problems. The construction of closed-ended questions should be guided by two structural requirements.

First, the response categories provided should be exhaustive or totally inclusive; they should include all the possible responses that might be expected. Often, this is ensured by adding a category such as "Others (Please specify)". Second, the answer categories must be mutually exclusive; the respondent should not feel compelled to select more than one. (In some cases, you may wish to solicit multiple answers, but these may create difficulties in data processing and analysis later on).

To ensure that your categories are mutually exclusive, carefully consider each combination of categories, asking yourself whether a person could reasonably choose more than one answer. In addition, it's useful to add an instruction to the question asking the respondent to select the one best answer, but this technique is not a satisfactory substitute for a carefully constructed set of responses.

One of the advantages of the questionnaire method is that it can be used to cover a large sample where interview may not be appropriate. In most cases, researchers have more respondents to interview and the only way to reduce the stress is to adopt the questionnaire method. Also, it is appropriate for quantitative analysis which allows for the use of computer for ease of analysis. The fact that it gives room for wider coverage, it also allows for wider opinions on issues.

However, questionnaire method is open to manipulations, like any other quantitative method. Cases of dishonesty in filling questionnaire abound, particularly where the research involves the use of inexperienced and uncommitted research assistants. In this case, the commitment of the research assistant is very important for the reliability and validity of the responses through questionnaire method.

3.4 Guide to Design a Good Questionnaire

In designing a questionnaire, certain guides must be considered so as to make the filling of the questionnaire interesting to the respondents. This is important because some questionnaires are boring and time consuming and this may create boredom thereby making the respondent to abandon the questionnaire half way. This may not be in the interest of the researcher as this may occur in several respects, even when the respondents are not in the same environment. Therefore, the following guides should be taken into consideration when designing a questionnaire;

(i) *Make items clear*: It should go without saying that questionnaire items need to be clear and unambiguous, but the broad proliferation of unclear and ambiguous questions in surveys makes the point worth emphasising. We can become so deeply involved in the topic under examination that opinions and perspectives are clear to us but not to our respondents – many of whom have paid little or no attention to the topic. The possibilities for misunderstanding are endless, and no researcher is immune.

(ii) *Avoid Double-Barreled Questions:* Frequently researchers ask respondents for a single answer to a question that actually has multiple parts. That seems to happen most often when the researcher has personally identified with a complex question. As a general rule, whenever the word and appears in a question or questionnaire statement, check whether you are asking a double-barreled question.

(iii) *Respondents must be Competent to Answer*: In asking respondents to provide information, you should continually ask yourself whether they can do so reliably. It is always important for researchers to act respondents when designing and sending out questionnaire. In this manner, researchers will be able to identify the competency of respondents to answer questions in a questionnaire.

(iv) *Questions should be Relevant*: Similarly, questions asked in a questionnaire should be relevant to most respondents. When attitudes are requested on a topic that few respondents have thought about or really care about, the results are not likely to be useful. When you obtain responses to fictitious issues, you can disregard those responses. But when the issue is real, you may have no way of telling which responses genuinely reflect attitudes and which reflect meaningless answers to an irrelevant question.

(v) *Short Items are best*: In the interests of being unambiguous and precise and of pointing to the relevance of an issue, researchers tend to create long and complicated items. This should be avoided. Respondents are often unwilling to study an item in order to understand it. The respondent should be able to read an item quickly, understand its intent, and select or provide an answer without difficulty.

(vi) *Avoid Negative Items*: The appearance of a negation in a questionnaire items paves way for easy misinterpretation. For example, ask a respondents to agree or disagree with this statement "EFCC should not prosecute corrupt politicians", a sizeable number of the respondents will read over the word not and answer on that basis. Thus, some will agree with the statement when they are indeed in favor of EFCC prosecuting corrupt politicians, and other will agree when they oppose it (Polivka and Rothgeb, 1993).

SELF-ASSESSMENT EXERCISE

List and explain five guides for the design of a good questionnaire

4.0 CONCLUSION

After reading this unit, students should be able to understand the use of questionnaire method in collecting data for political inquiry. They should be able to identify the different styles of designing a questionnaire and distinguish between open-ended and closed-ended questions. Also, students should be able to identify the merits and demerits of questionnaire method of data collection in any scientific inquiry.

5.0 SUMMARY

This unit examines the meaning of questionnaire method as a technique of data collection in scientific inquiry. It explains the uses of questionnaire and the technicalities involved in the various format and

styles of designing questionnaire. Apart from this, the unit examines the structures of questionnaire available and the applicability of these structures for different research orientations and their method of analysis. The unit also explained the advantages and disadvantages of using questionnaire method.

6.0 TUTOR-MARKED ASSIGNMENT

1. Distinguish between open-ended and closed-ended questionnaire.
2. List and explain five important guides to design a questionnaire.
3. List three advantages and three disadvantages of the questionnaire method.

7.0 REFERENCES/FURTHER READING

Asika, N. (1991) *Research Methodology in the Behavioural Sciences, Ikeja;* Longman.

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UNIT 3 INTERVIEW METHOD

CONTENTS

1.0 INTRODUCTION

This unit examines the interview method as a technique of data collection in scientific inquiry. It explains the uses of interview method and the types of interview method employed for political inquiry. The unit also explains the structure of interview method and their merits and demerits vis-à-vis other methods of data collection.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- apply interview method as a technique of data collection
- describe the various types of interview method
- explain the advantages and disadvantages of interview method.

3.0 MAIN CONTENT

3.1 Meaning of Interview

The interview is an alternative method of collecting data for an inquiry. Rather than asking respondents to read questionnaires and enter their own answers, researchers send interviewers to ask questions orally and record respondents' answers. In a way, interview is a data collection encounter in which one person (an interviewer) asks questions of another (a respondent). Interview may be conducted face-to-face or by telephone. Interviewing is typically done in a face-to-face encounter, but telephone interviewing follows most of the same guidelines.

Most interviews require more than one interviewer, although the researcher might undertake a small-scale interview personally. Respondents seem more reluctant to turn down an interviewer standing on their doorstep than to throw away a mailed questionnaire. The presence of an interviewer also generally decreases the number of "don't know" and "no answers". Further, if a respondent clearly misunderstands the intent of a question or indicates that he or she does not understand, the interviewer can clarify matters, thereby obtaining relevant responses. Also, the interviewer can observe respondents as well as ask questions.

Survey interview is of necessity based on an unrealistic stimulus-response theory of cognition and behavior. Researchers must assume that a questionnaire item will mean the same thing to every respondent, and every given response must mean the same when given by different respondents. Although this is an impossible goal, survey questions are drafted to approximate the ideal as closely as possible. The interviewer must also fit into this ideal situation. The interviewer's presence should not affect a respondent's perception of a question or the answer given. In other words, the interviewer should be a neutral medium through which questions and answers are transmitted. As such, different interviewers should obtain exactly the same responses from a given respondent. To save time and money, a given interviewer is typically assigned to complete all the interviews in a particular geographic area – a city block or a group of nearby blocks. If the interviewer does anything to affect the responses obtained, the bias thus interjected might be interpreted as a characteristic of the area.

Interviewers must ask questions in such a way that respondents will answer honestly and fully. To this end, interviewers must establish rapport, such as the interviewer should not rush the respondents, and also must be a good listener. A large school of thought favors the position that good interviewers are born, not taught. Certainly, a skilled questioner needs ample supplies of personality, training and experience. Interviews can be classified into three, vise; poll-type, informal, and analytical. The poll type interview allows interviewers to read questions precisely as they are written and otherwise adheres strictly to instructions. Little skill is demanded. The informal or intensive or qualitative or conversional or case history interview allows the interviewer moderate latitude. He or she may select any one of several phrasings of a question, or he may change the order of questions if the respondent leads him unexpectedly to a topic that normally appears later in the interview. Interviewing has some advantages. It can be used with almost all segments of the population provided the interviewer is familiar with the language and culture of the segments of the population concerned, particularly in a plural or multi ethnic society. Also, the

interviewing situation offers a better opportunity than the questionnaire method to appraise validity of response since the interviewer meets face-to-face with the respondents. Again, interview method is flexible in approach. It allows an interviewer to respond adequately to the stimuli of respondents during the interview. Finally, it is a more appropriate method for revealing information about complex and emotion-laden subjects.

The disadvantages are; it is very much expensive as it involves cost of transportation and telephone in most cases. It is inappropriate in a society where the telecommunication gadget is unreliable such as Nigeria. Also, the uncooperative attitude of respondents is usually the greatest headache of a researcher when this method is used.

3.2 Types of Interview Method

Apart from the classification of interview method into face-to-face and telephone interviews, it is also important to recognise that interview can be classified into three main types. These are the Focus Group Discussion (FGD), In-Depth Interview (IDI), and the Key Informant Interview (KII). These are hereunder explained.

1. Focus Group Discussion

This is a planned, facilitated discussion among a small group of stakeholders designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment. A focus group discussion (FGD) is a group discussion of approximately 6 - 12 persons guided by a facilitator, during which group members talk freely and spontaneously about a certain topic. A FGD is a qualitative method. Its purpose is to obtain in-depth information on concepts, perceptions and ideas of a group. A FGD aims to be more than a question-answer interaction. The idea is that group members discuss the topic among themselves, with guidance from the facilitator.

Focus groups are good for initial concept exploration, generating creative ideas and determining differences in opinion between various stakeholders groups. Focus groups are often used as a means of triangulation with other data collection methods. They are not effective for responding to general questions, building consensus or making decisions. Focus groups are relatively inexpensive and the format is flexible, allowing participants to question each other and to elaborate upon their answers. Guided discussion in focus groups more closely captures the spontaneous give and take of social interaction that goes into opinion formation, which is lost in a structured interview. The method is

relatively simple, allowing participants to readily grasp the process and purpose. When the power differential between the participants and the decision-makers is great enough to discourage frank participation, the focus group provides the security of a peer group.

The multiple voices of the participants, as well as the flexibility in process structure, results in limited researcher control over the focus group process. Sometimes group expression can interfere with individual expression and the results may reflect 'groupthink'. Alternatively, if facilitation is poor and/or the group participants are not well selected, the results of the discussion may reflect only the views of the most dominant participants.

2. In-Depth Interview

In-depth interviewing is usually done at the beginning of a major research project, when you will be studying a population that you have never researched before. In-depth interviews - also called "semi-structured interviews", or "informal interviews" - are very different from survey interviews. They are much more similar to journalistic interviews. Some of the differences between survey interviewing and in-depth interviewing are; a survey usually has at least 100 interviews, but with informal research, 20 respondents are often enough; a survey has a fixed questionnaire. All the respondents are asked the same questions (except those skipped), in the same order; however, with in-depth interviewing, there are no specific questions. Instead of beginning with "Which of the following statements..." an informal interviewer might say "Can you tell me about a time when you..." with in-depth interviewing, there is no specific order. The respondent may jump from one subject to another. The interviewer has a list of things to be discovered, but the wording and sequence of the "questions" depend on the "answers" the respondent gives; instead of using a fully random sample, in-depth interviews are usually done with people who are deliberately chosen to be as different as possible from each other.

The reason for these differences between survey interviewing and in-depth interviewing is that their purposes are different. Unlike survey interviewing, in-depth interviewing does not claim to obtain results that can be generalised to a whole population. You normally use in-depth interviewing for collecting background information, so that when you write a questionnaire, you will be able to use questions and wording that are more relevant to the population being studied.

3. Key Informant Interview

The key informant interview is a standard anthropological method that is widely used in health related and other social development inquiry. This is one method used in rapid assessment for gathering information from the affected community. The term “key informant” refers to anyone who can provide detailed information and opinion based on his or her knowledge of a particular issue. Key informant interviews seek qualitative information that can be narrated and cross checked with quantitative data, a method called “triangulation”. A key informant interview is a loosely structured conversation with people who have specialised knowledge about the topic you wish to understand. Key informant interviews were developed by ethnographers to help understand cultures other than their own. A good key informant can convey this specialised knowledge to you.

Key informant interviews have some advantages over other forms of data collection. They are easier and less expensive than focus groups since they involve only one respondent and one interviewer and do not require incentive payments, refreshments, or special facilities. Other benefits include the following; they are inexpensive and simple to conduct; they provide readily understandable information and compelling quotations for reports they are flexible, as questions and topics can be added or omitted during the interview.

3.3 Choosing Interviewers

As long as the questionnaire is well designed and instructions are clear, interviewers can be relatively unskilled. With in-depth interviews, there are only three rules vise; you need to decide in advance which main topics you want the interview to cover; you need to decide whether everybody will be asked the same questions, or you will change the questions, depending on the respondent; the interview needs to be recorded in some way. Because there are no fixed rules, there are no standard procedures, so the quality of the interview depends very much on the skill of the interviewer. It is therefore normal to use highly skilled interviewers, who have been working closely with the project leaders, so that the interviewers know the main issues of interest in the study. Often, it is the chief researchers themselves who do the informal interviews, because they have a better knowledge than anybody else of the project's purposes.

If the chief researchers are not experienced or confident interviewers, trained interviewers can be used, but they should be

chosen well in advance, and participate in the development of the research.

3. 4 Use Pairs of Interviewers

It has been found that it is best for interviewers to go out in pairs. At the beginning of each interview, one speaks to the respondent, while the other takes notes and works the tape recorder. Part of the way through the interview, the two interviewers swap their roles. The advantage of this is that different interviewers think of different questions, and often a respondent will say something to one interviewer but not to another.

As soon as the interview is concluded, the two interviewers can discuss the findings. Before they do anything else, they should write up their notes on the interview. Even if the interview has been taped, some nuances will be forgotten as soon as the next interview is done. Also, having notes on each interview makes it easier to interpret the results, and serves as a backup if the tape recording fails.

After each interview, the two interviewers can also discuss their techniques of interviewing, the wording they use, and decide on ways to improve. In each of the first few interviews, some issues will arise that you had not thought of before, and these will create questions to be asked in later interviews. In fact, it is only when you stop finding new questions that you can be sure the sample was large enough.

3. 5 Finding Respondents

The best way to obtain a true cross-section of the population is through random sampling if it is survey. In-depth interviewing is different; it is usually a preliminary exercise, designed to find the most appropriate questions to ask in a later survey. So it is the survey that will provide the representative results: the in-depth interviews by themselves do not produce definitive data. In-depth interviews need to ensure that many different types of respondent are interviewed. This is best done, not with random sampling, but with maximum-diversity sampling. When the sample size is less than about 30, a random sample will have a high chance of not being fully representative of the population.

3.6 General Guidelines for Survey Interviewing

The manner in which interviews ought to be conducted will vary somewhat by survey population and survey content. Nevertheless, some general guidelines apply to most interviewing situations. Firstly, appearance and demeanor is important in interview. As a rule, interviewers should dress in a fashion similar to those they will be

interviewing. A richly dressed interviewer will probably have difficulty getting good cooperation and responses from poorer respondents; a poorly dressed interviewer will have similar difficulties with richer respondents. To the extent that the interviewer's dress and grooming differ from those of the respondents, it should be in the direction of cleanliness and neatness in modest apparel. If cleanliness is not next to godliness, it appears at least to be next to neutrality. Dress and grooming are typically regarded as signs of a person's attitudes and orientations. Torn jeans, green hair, and razor blade earrings may communicate - correctly or incorrectly – that the interviewer is politically radical, sexually permissive, favourable to drug use, and so forth. Any of these impressions could bias responses or affect the willingness of people to be interviewed.

Secondly, familiarity with the questionnaire is another important guide to a good interview. If an interviewer is unfamiliar with the questionnaire, the study suffers and the respondent faces an unfair burden. The interview is likely to take more time than necessary and be unpleasant. Moreover, the interviewer cannot acquire familiarity by skimming through the questionnaire two or three times. He or she must study it carefully, question by question, and must practice reading it aloud. Ultimately, the interviewer must be able to read the questionnaire items to respondents without error, without stumbling over words and phrases. A good model is the actor reading lines in a play or movie. The lines must be read as though they constituted a natural conversation, but that conversation must follow exactly the language set down in the questionnaire. By the same token, the interviewer must be familiar with the specifications prepared in conjunction with the questionnaire. Inevitably, some questions will not exactly fit a given respondent's situation, and the interviewer must determine how the question should be interpreted in that situation.

Thirdly, interviewer should be able to follow question wording exactly. A slight change in the wording of a given question may lead a respondent to answer "yes" rather than "no". It follows that interviewers must be instructed to follow the wording of questions exactly. Otherwise, all the effort that the developers have put into carefully phrasing the questionnaire items to obtain the information they need and to ensure that respondents interpret items precisely as intended will be wasted.

Whenever the questionnaire contains open-ended questions, those soliciting the respondent's own answers, the interviewer must record those answers exactly as given. No attempt should be made to summarise, paraphrase, or correct bad grammar. This exactness is important because the interviewer will not know how the responses are

to be coded. Indeed, the researchers themselves may not know the coding until they have read a hundred or so responses. Therefore, it is important that interviewer record the responses exactly as they are presented.

Finally, interviewers should be able to probe for responses. Sometimes respondents in an interview will give an inappropriate or incomplete answer. In such cases, a probe, or request for an elaboration, can be useful. Probes are more frequently required in eliciting responses to open-ended than closed-ended questions.

SELF-ASSESSMENT EXERCISE

List and explain three general guidelines for survey interviewing.

4.0 CONCLUSION

It is important to note that the interview method of data collection provides opportunity for researchers to study the environment of the interviewee, apart from asking question on the chosen subject. In most cases, the environment plays important role in the responses of respondents. Also, the use of interview method should be justified at every point in time, since there are different classifications of this method.

5.0 SUMMARY

In this unit, we have explained the meaning of interview method, the uses of the method and the various types or classification of the interview method. The unit has also demonstrated the advantages of the method over other methods of data collection in the social sciences.

6.0 TUTOR-MARKED ASSIGNMENT

1. List and explain the various classifications of interview method.
2. Distinguish between an In-Depth Interview and a Key Informant Interview.
3. Identify the major guidelines to conduct an interview.

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UNIT 4 PARTICIPANT OBSERVATION METHOD

CONTENTS

1.0 INTRODUCTION

This unit introduces students to the meaning of participant observation as a technique of data collection in the field of social sciences. It explores the importance of the participant observation method and the uses of the method. It analyses the heuristic value of the method as well as the danger it portends for some social inquiry.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- define participant observation
- state the usefulness of participant observation in social research
- discuss the guidelines for the conduct of participant observation.

3.0 MAIN CONTENT

3.1 Meaning of Participant Observation

Participant observation is a qualitative method with roots in traditional ethnographic research, whose objective is to help researchers learn the perspectives held in study populations. As qualitative researchers, presume that there will be multiple perspectives within any given community that are interested both in knowing what those diverse perspectives are and in understanding the interplay among them. Qualitative researchers accomplish this through observation alone or by both observing and participating to varying degrees, in the study community's daily activities. Participant observation always takes place in community settings, in locations believed to have some relevance to the research questions.

The method is distinctive because the researcher approaches participants in their own environment rather than having the participants come to the researcher. Generally speaking, the researcher engaged in participant observation tries to learn what life is like for an "insider" while remaining inevitably, an "outsider."

While in these community settings, researchers make careful, objective notes about what they see, recording all accounts and observations as field notes in a field notebook. Informal conversation and interaction with members of the study population are also important components of the method and should be recorded in the field notes, in as much detail as possible. Information and messages communicated through mass media such as radio or television may also be pertinent and thus desirable to document. Data obtained through participant observation serve as a check against participants' subjective reporting of what they believe and do. Participant observation is also useful for gaining an understanding of the physical, social, cultural, and economic contexts in which study participants live; the relationships among and between people, contexts, ideas, norms, and events; and people's behaviors and activities – what they do, how frequently, and with whom.

In addition, the method enables researchers to develop a familiarity with the cultural milieu that will prove invaluable throughout the project. It gives them a nuanced understanding of context that can come only from personal experience. There is no substitute for witnessing or participating in phenomena of human interaction – interaction with other people, with places, with things, and with states of being such as age and health status. Observing and participating are integral to understanding the breadth and complexities of the human experience – an overarching research endeavor for any public health or development project.

Through participant observation, researchers can also uncover factors important for a thorough understanding of the research problem but that were unknown when the study was designed. This is the great advantage of the method because, although we may get truthful answers to the research questions we ask, we may not always ask the right questions. Thus, what we learn from participant observation can help us not only to understand data collected through other methods (such as interviews, focus groups, and quantitative research methods), but also to design questions for those methods that will give us the best understanding of the phenomenon being studied.

3.2 Disadvantages of Participant Observation Method

The main disadvantage of participant observation is that *it is time-consuming*. In traditional ethnographic research, researchers spend at

least one year in the field site collecting data through participant observation and other methods. This is not practical for most applied research studies, which necessarily require a shorter period of data collection. This weakness is partially mitigated in most current international development projects by the tendency for the inquiry to be more focused than in traditional ethnographic study and for the data collection team to include researchers who are native rather than foreigners to the region. Researchers who already possess a solid base of cultural awareness are better able to concentrate on the research question itself.

A second disadvantage of participant observation is the *difficulty of documenting the data* – it is hard to write down everything that is important while you are in the act of participating and observing. As the researcher, you must therefore rely on your memory and on your own personal discipline to write down and expand your observations as soon and as completely as possible. It is easy to tell yourself that you will do this task later, but, because memory fades quickly, postponing the expansion of notes can lead to loss or inaccurate recording of data. The quality of the data therefore depends on the diligence of the researcher, rather than on technology such as tape recorders.

A third disadvantage of participant observation is that it is an *inherently subjective exercise*, whereas research requires objectivity. It is therefore important to understand the difference between reporting and describing what you observe (more objective) versus interpreting what you see (less objective). Filtering out personal biases may take some practice. One way to practice is to write down objective observations of a given event on one side of a page, and then offer more subjective interpretations of the same event on the other side of the page. Alternately, in team-based research, field staff can review one another's field notes and help identify objective versus subjective observations.

3.3 Importance of Participant Observation

Participant observation is a standard approach of *anthropological* and *sociological* research through which you become immersed in the day-to-day activities of the people you are trying to understand. Beyond simple observation and participation, it is a process for establishing rapport and for learning to blend into a community so that its members will act naturally while maintaining the ability to remove oneself from the setting to be able to analyse and write about the experience (Bernard, 2002).

Participant observation is useful for providing an in–depth and holistic view of a community or of particular phenomena under study. Extended

periods of participant observation allow you to apprehend a people's knowledge, their beliefs and practices, and how they interrelate. It is typically used in conjunction with other qualitative and quantitative methods, such as surveys, questionnaires and interviewing. By allowing you to collect various types of data, it can increase the validity of your research and facilitate involvement in sensitive activities that might otherwise remain hidden from an outsider. As a community becomes more familiar with you, and as you become more a part of the community, there are often fewer instances of what Bernard (2002), refers to as "reactivity" i.e. people acting in a certain way when they are aware of being observed. Additionally, with greater cultural understanding and awareness you can develop questions that make sense to the community and are culturally relevant, thus eliciting answers that are more accurate and richer data.

Critics argue that information collected during participant observation is not truly representative of a culture, as much of the data is based on a researcher's background and goals, rather than on what actually happens within a community. Accuracy of participant observation can be improved by reflecting on how your gender, ethnicity, class, and theoretical approach may affect observation, analysis, and interpretation. For example, because male and female researchers have access to different people, settings and bodies of knowledge they often elicit different information. An awareness of these differences will allow you to accept your own subjectivity, to accurately represent your data and to portray from which subset of the community they are derived. Additionally, this awareness can ensure greater accuracy and respect from the community as they come to accept that what you think is being said matches the intentions of those observed.

SELF-ASSESSMENT EXERCISE

Explain why you think participant observation is crucial in research?

4.0 CONCLUSION

The use of participant observation method for collection of data provides researcher the opportunity to gather raw data and directly from the event or people being observed. However, the addictive nature of the method may turn the researcher or the participant into another object of research. This is because it is not every social activity that is participant observable without paying price. For instance, a researcher of drug use may eventually become another drug addict if care is not taken, particularly in the case of dangerous drugs like cocaine, heroin and morphine etc.

5.0 SUMMARY

In this unit, we have been able to establish the nature of participant observation as a method of data collection in the social sciences. This unit has also been able to highlight the advantages of participant observation over other methods and the danger inherent in the use of the method for political inquiry.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe the usefulness of participant observation.
2. Examine the importance of participant observation.
3. Distinguish between participant observation and key informant interview.

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UNIT 5 DOCUMENTARY/CONTENT ANALYSIS METHOD

CONTENTS

1.0 INTRODUCTION

This unit examines documentary content analysis method of data collection for political inquiry. The unit portrays documentary and content analysis as one of the main methods employed by social scientists for their inquiries. The unit explains the merits and the demerit of both methods for data collection and stated that the usage of any of them depends on the understanding of the researcher and the type of research.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- identify the intricacies involved in the use of documentary method
- discuss the merits and the merits of the content method.

3.0 MAIN CONTENT

3.1 Meaning of Documentary Analysis Method

Documentary analysis is a social research method and is an important research tool in its own right and is an invaluable part of most schemes of triangulation. Documentary work involves reading lots of written material (it helps to scan the documents onto a computer and use a qualitative analysis package). A document is something that we can read and which relates to some aspect of the social world. Official documents are intended to be read as objective statements of fact but they are themselves socially produced.

Documentary research is the use of outside sources to support the viewpoint or argument of an academic work. The process of documentary research often involves some or all of conceptualising, using and assessing documents. The analysis of the documents in documentary research would be either quantitative or qualitative analysis (or both). The process is utilised in most academic work (in fact, most high school and certainly college level courses would insist on references in academic work) in supporting the academic prose of the writer.

Documentary research involves the use of texts and documents as source materials; government publications, newspapers, certificates, census publications, novels, film and video, paintings, personal photographs, diaries and innumerable other written, visual and pictorial sources in paper, electronic, or other `hard copy' form. Along with surveys and ethnography, documentary research is one of the three major types of social research and arguably has been the most widely used of the three throughout the history of sociology and other social sciences. It has been the principal method - indeed, sometimes the only one - for leading sociologists. The key issues surrounding types of documents and our ability to use them as reliable sources of evidence on the social world must be considered by all who use documents in their research. The paucity of sources available until now means that this compendium will be invaluable to social researchers." (Scott 2006).

3.2 Merits and Demerits of Documentary Research

The first advantage of such an approach to doing research is that it is usually readily available. The information to be used in documentary research can be accessed by researchers by simply visiting the resource centers or just browsing the internet.

The second advantage is that doing this research is less expensive as compared to surveys and ethnography. For surveys, one has to do a pilot study and then do actual field data collection incurring travelling expenses. Experimentation may involve use of scientific apparatus that have to be purchased. The only costs involved in documentary research may be bureau and miscellaneous expenses.

The third advantage is that some information may only be obtained by secondary sources. For example, information on ancient histories which cannot be found by interview surveys or archaeological data that has been documented but the sites might have changed and can only be obtained from libraries or museum.

Despite the above merits, documentary research has the following limitations;

(i) Information obtained may be biased;
(ii) Personal biases and prejudices could have influenced past work that was documented by authors; (iii) such information may therefore lack credibility and hence research findings based on such work may be discredited.

3.3 Meaning of Content Analysis

Content analysis has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding. Holsti (1969) offers a broad definition of content analysis as, "any technique for making inferences by objectively and systematically identifying specified characteristics of messages". However, the technique of content analysis is not restricted to the domain of textual analysis, but may be applied to other areas such as coding student drawings, or coding of actions observed in videotaped studies (Stigler, Gonzales, Kawanaka, Knoll, & Serrano, 1999). In order to allow for replication, however, the technique can only be applied to data that are durable in nature.

Content analysis enables researchers to sift through large volumes of data with relative ease in a systematic fashion. It can be a useful technique for allowing us to discover and describe the focus of individual, group, institutional, or social attention (Weber, 1990). It also allows inferences to be made which can then be corroborated using other methods of data collection. Krippendorff (1980) notes that "such content analysis research is motivated by the search for techniques to infer from symbolic data what would be either too costly, no longer possible, or too obtrusive by the use of other techniques".

3.4 The Merits and Demerits of Content Analysis

Content analysis can be a powerful tool for determining authorship. For instance, one technique for determining authorship is to compile a list of suspected authors, examine their prior writings, and correlate the frequency of nouns or function words to help build a case for the probability of each person's authorship of the data of interest. Mosteller and Wallace (1964) used Bayesian techniques based on word frequency to show that Madison was indeed the author of the Federalist papers; Foster (1996) used a more holistic approach in order to determine the identity of the anonymous author of the 1992 book *Primary Colors*.

Additionally, content analysis provides an empirical basis for monitoring shifts in public opinion. Data collected from the mission statements project in the late 1990s can be objectively compared to data collected at some point in the future to determine if policy changes related to standards-based reform have manifested themselves in school mission statements.

Content analysis in particular:

Advantages

i. looks directly at communication via texts or transcripts, and hence gets at the central aspect of social interaction;

ii.can allow for both quantitative and qualitative operations;

iii. can provide valuable historical/cultural insights over time through analysis of texts;

iv. allows a closeness to text which can alternate between specific categories and relationships and also statistically analyses the coded form of the text;

v. can be used to interpret texts for purposes such as the development of expert systems (since knowledge and rules can both be coded in terms of explicit statements about the relationships among concepts);

vi.is an unobtrusive means of analysing interactions and; provides insight into complex models of human thought and language use.

Disadvantages
However, content analysis suffers from several disadvantages, both theoretical and procedural.

i. Content analysis can be extremely time consuming;
ii. is subject to increased error, particularly when relational analysis is used to attain a higher level of interpretation;
iii. is often devoid of theoretical base, or attempts to liberally draw meaningful inferences about the relationships and impacts implied in a study;
iv. is inherently reductive, particularly when dealing with complex texts;
v. tends too often to simply consist of word counts;
vi. often disregards the context that produced the text, as well as the state of things after the text is produced and;
vii. can be difficult to automate or computerise.

SELF-ASSESSMENT EXERCISE

List five advantages and disadvantages of content analysis method.

4.0 CONCLUSION

The documentary method is easy to collect without much stress, but its pitfall is to obey the doctrine of "official secrecy" where it is strictly followed. In the same manner, content analysis provides opportunity for researchers to understand the work of others, even if they are no longer living. It allows for true representation without misconception.

5.0 SUMMARY

This unit has explained the importance of documentary/content analysis method in political science inquiry/ social sciences research. It is important to note that both can be used in a particular research exercise. What is important is for the user to be mindful of the advantages and disadvantages of these methods of data collection.

6.0 TUTOR-MARKED ASSIGNMENT

1. Describe documentary analysis/research.
3. Differentiate between documentary analysis and content analysis.
4. Mention three advantages and three disadvantages of documentary analysis.

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