

CHAPTER ONE

Overview of Research Process, Defining Basic Concepts and Terminologies

Paradigms of Social Research

- Paradigm to Plato mean Model
- Paradigm for Aristotle mean Example

In the social sciences its use has been inflated and confused by multiple and different meanings: these range from a synonym for theory to an internal subdivision of a theory, from a system of ideas of a pre-scientific nature to a school of thought, from an exemplary research procedure to the equivalent of method

Kuhn defines *normal science as those phases* in a scientific discipline during which a given paradigm, amply agreed to by the scientific community, predominates.

Normal-scientific research is directed to the articulation of those phenomena and theories that the paradigm already supplies' (Kuhn, 1962: 24).

What is Paradigm?

What does Thomas Kuhn mean by 'paradigm'? He means a theoretical perspective: accepted by the community of scientists of a given discipline; founded on the previous acquisitions of that discipline; that directs research through: a. the specification and choice of what to study b. The formulation of hypotheses to explain the phenomenon observed c. The identification of the most suitable empirical research techniques.

Kuhn notes that the paradigm is a characteristic feature of the 'mature' sciences. Because the social sciences lack a single paradigm broadly shared by the scientific community, they are in a pre-paradigmatic state. This paves the way for the presence of multiple paradigms inside a given discipline. Instead of being a *pre-paradigmatic discipline*, sociology becomes a *multi-paradigmatic one*

Fundamental to the concept of the paradigm is its pre-theoretical and, in the final analysis, metaphysical character of a 'guiding vision', 'a view of the world', which shapes and organizes both theoretical reflection and empirical research and, as such, precedes both.

Three Fundamental questions

Does (social) reality exist? Is it knowable? How can we acquire knowledge about it? In other words: *Essence, Knowledge and Method.*

The ontological question

This is the question of 'what'. *It asks if the world of social phenomena is a real and objective world endowed with an autonomous existence outside the human mind and independent from the interpretation given to it by the subject.*

The epistemological question

This is the question of the relationship between the 'who' and the 'what' (and the outcome of this relationship). The answer to epistemological question depends on the answer to the previous ontological question

The methodological question

This is the question of 'how' (how can social reality be studied?)

Paradigms in Social Sciences

Positivism

- a. Ontology: Social reality is real and knowable as if it were a thing
- b. Epistemology: Dualism-Objectivity, true results, experimental science, Goal: explanation, Generalization: natural laws
- c. Methodology: Experimental, manipulative, observation, observer-observed detachment, induction, quantitative techniques, analysis by variables

Post-positivism

- a. Ontology:** Social reality is real but knowable only in an imperfect and probabilistic manner
- b. Epistemology:** Modified dualism-objectivity, results probabilistically true, experimental science in search of laws, multiplicity of theories for a same fact, Goal: explanation, Generalization: provisional laws open to revision
- c. Methodology:** Modified experimental-manipulative, observer-observed detachment, mostly deduction (disproof of hypotheses), quantitative techniques with some qualitative analysis, by variables

Interpretivism

- a. Ontology: Constructivism:** The knowable world is that of meanings, attributed by individuals, Relativism (multiple realities): constructed realities vary in form and content, among individuals, groups and cultures.
- b. Epistemology:** Non-dualism, non-objectivity, researcher and object of the study are not separate, but interdependent, interpretive science in search of meaning, Goal: comprehension, generalization: ideal type
- c. Methodology:** Empathetic interaction between the researcher and object studied, interpretation: observer-observed interaction, induction-knowledge emerges from the reality studied, qualitative techniques, analysis by cases

WHAT IS THEORY?

A theory is a set of interrelated abstract propositions or statements that offers an explanation of some phenomenon. A theory is a set of interrelated concepts that guide actions and conceptualizations. Theories provide clues or suggestions for intervention and help to explain things that we do not understand very well. Theories result from weaving together what is known with what is conjecture/guess.

There are three elements in theory.

1. Theories are made up of propositions
2. Theories are abstract systems, they link general and abstract propositions to particular, testable events or phenomena
3. Theories provide explanations for the phenomena they address

The three functions of theories include:

1. Explanation of phenomena: Theories provide an explanation for phenomena
2. They say not only what will happen but also why it will happen
3. Guide for research and practice
4. Integration of multiple observations

Theories help integrate and explain the many observations made in diverse settings by researchers and practitioners. Theories vary considerably in their complexity, their perspective or orientation, or the amount of evidences that can gathered to support them. The ultimate purpose of a theory is to explain why something occurred. We all use theories in our everyday lives, although we may not call them theories or be consciously aware of using them. We base our decisions on our past experiences and what we have learned from others. The acceptance of a particular theoretical position is determined at least partly by the prevailing social climate, and frequently in large part by the personalities of the advocates of competing theoretical perspectives

Concepts and Hypothesis

Concepts: An important part of theory is concepts

Concepts are the elements of theories mentioned earlier. Concepts are the building blocks that are interrelated in propositions to form the explanatory statement of a theory. Concepts are similar in functions to the words we use in everyday communication.

Scientific analysis involves two types of definitions of concepts. At the theoretical or abstract level concepts are given nominal definitions. Nominal definitions are analogous to dictionary

definitions of words. An important step in moving from the abstract level of theory to the concrete level of research is to give concepts operational definitions.

Hypotheses: A hypothesis is an assumption that is expressed as a statement. Hypothesis as an expectation about the way things ought to be in the world if the theoretical expectations are correct. Hypotheses may be thought of as formal versions of hunches/guesses, notions, or speculations. Hypotheses can predict a direction or express an assumed relationship between variables. Occasionally hypotheses are stated neutrally. These are known as **null hypotheses**. The researcher does not have to believe that there is no difference or no relationship in order to state a null hypothesis.

Variables

A variable is a concept that can be measured. Variables are sometimes also referred to as factors. Variables can be discrete or continuous. Discrete variables present either or choices

Attributes

Attributes are the component parts of a variable. Example, **the attributes** at the variable gender are **male or female**.

Independent variables: Independent variables are variables that are suspected to influence, affect, or cause the event or situation that is studied

Dependent variables: Dependent variables are what the researchers are trying to explain or predict the topic of their investigation. Dependent variables in one study may be used as independent variables in another study

Data: Information that is obtained during a study and that has not been analyzed constitutes the data

Measurement: One of the keys to understanding social science research is the notion that if a thing can be defined, then it can be measured

The importance of measurement is treated in two axioms

1. If you cannot measure the client's problem it does not exist
2. If you cannot measure the client's problem you cannot treat it

Subjects: Subjects are the persons or individuals who participate in a study. Subjects provide the data that are examined or analyzed

Correlations: A correlation coefficient (r) is a statistic which helps us to understand relationships between two variables. Correlation is summarized as numerical values that ranges between -1.00 and + 1.00

Scales: A scale is a cluster or group of statements or questions that are designed to measure a single concept. Scales can be developed to measure many different kinds of problems or concepts. Scales vary enormously in how well they measure the concept they were designed to measure and in how dependable they are

Instruments: An instrument is a questionnaire or test that is usually completed by the respondents. An instrument is often a scale or, more precisely composed of several scales

Reliability: Reliability is an easy term to understand because its usage by researchers is very close to its use in the everyday world. When a watch keeps time accurately it is said to be reliable. To determine reliability, researchers will often administer a scale to the same group on more than one occasion.

Validity: An instrument is said to be valid when it measures what it was designed to measure

- There are three types of validity:
 1. Content validity
 2. Criterion validity
 - a. Concurrent approaches
 - b. Predictive approaches
 3. Construct validity

Bias: Researchers strive to eliminate bias from their study. Bias is an outside influence or prejudice that tends to produce some distortion from what is actually occurring or present. Bias can be

conscious or unconscious, glaring or subtle and may creep in and affect the research process at various points.

Generalizability: Generalizability means how well the findings from a specific study fit another situation. There is over-generalizing

The Research Process

Research involves an orderly thought process that moves from what is known to what is not known. There are seven basic steps of a research process.

Step 1: Posing a question or stating a problem

Before one begins conducting a research it is a must necessarily limit oneself to one question or at least to a small part of related questions or one problem to be solved. Once a question has been roughly posed or drafted it will need to be restated as a researchable question. What causes child abuse is an example of a research question that is too expansive. This research question can be restated in a simpler and workable level:

- a. Were child abusers abused themselves as children?
- b. Do perpetrators of child abuse tend to be chemically dependent?

Parallel to a research question is a formulation of research hypothesis

- a. Example of research question: *What is the level of empathy among fathers who have sexually abused their children?*
- b. Example of a hypothesis: *Fathers who have sexually abused their children will have less empathy than non-abusing fathers*
- c. Null hypothesis: *There is no difference in the empathy level of fathers who have sexually abused their children and non-abusing fathers*

Step 2: Reviewing the literature

In the process of reviewing the literature, you learn what others have written about the topic. The more you read the more you have reviewed the literature. A thorough review of the literature will help you to ground your question within a theoretical framework.

Step: Developing a research design

A research design or methodology is something like a blueprint. It outlines the approach to be used to collect the data. It underlines the condition under which the data will be collected. It outlines how the respondents will be selected. What instruments will be used. The design generally provides information about the **Who, What, When, Where and How** of the research project. In developing the research designs ask yourself: What do I need to know; How will I go about getting it.

Several types of research designs exist and there are variations within these major types. Research designs can be categorized as having one of the three prime purposes; Exploration, Description and Explanation.

Exploration: Exploratory research designs are used with topics about which very little information is available

Description: Description studies tend to build upon exploratory efforts. Description studies are surveys on a large scale. Descriptive studies can provide precise information on the characteristics of a group of respondents

Explanation: Explanatory studies test hypotheses and attempt to explain a phenomenon

Step 4: Operationalizing

Before you can begin to collect data, an important part of a research process is to define the concepts or phenomena that are to be recognized or counted in your study. Variables must have an operational definition in order to reduce the role of subjectivity.

Step 5: Collecting data

This step is sometimes referred to as implementation of the study

This phase of the research process is obviously important. Without data you will have nothing to analyze or report. The way, the time of day, and the place you collect your data can have major effects upon the outcome of your study

Step 7: Writing the report

Writing the report is the final stage

The first part of the research report puts the research question or hypothesis in context, i.e:

- 1 A description of the extent or severity of the problem
- 2 The length of time it has been a problem
- 3 What is generally known or believed about the problem
- 4 Review the important studies found in the literature

Next is an explanation of the research methodology. The third section of the research report presents what was actually learned from the study. The final section contains suggestions for additional research in this area, how future research could be improved, and the limitation of the existing study.

Quantitative and Qualitative Research

In 1940s and 1960s the quantitative research had dominated. Qualitative research was considered as a sort of stepchild of social science research. It was only in the 1980s that qualitative research experienced a lively development.

Quantitative and Qualitative Research a Comparison

Research Planning

In qualitative research there is an open interactive relationship between theory and research. The two approaches in research differ in their use of concepts. In the quantitative approach, concepts are clarified and operationalized into variables even before the research begins. Another difference between quantitative and qualitative research can be seen in the personal relationship between the researcher and the object studied. In quantitative research certain level of

manipulation is acceptable. Qualitative researchers see the naturalistic approach: The researcher refrains from any form of manipulation, stimulation, or interference

Data Collection

One of the principal differences between the two approaches has to do with the research design

- Deciding what data collection tools are to be used
- Where data collection has to be carried out
- How many and which subjects or organizations have to be studied

Quantitative design is strictly structured and closed. Qualitative design is unstructured, open shaped during the course of data collection and able to capture the unforeseen.

Data Analysis

This is the phase in which the distinction between the quantitative and qualitative approach is more visible. Quantitative approach makes ample use of mathematical and statistical tools together with a whole array of tables, graphs, statistical tests, etc. In qualitative analysis, there are no statistical-mathematical apparatuses and the contribution of information technology.

Production of Results

The two classical forms of data presentation in the quantitative and qualitative traditions respectively are the table and the account. The use of tables and accounts is not restricted to one of the other research type. The conclusion of a study has to go beyond a simple exposition of the distribution of the variables or a mere illustration of cases

Comparison between quantitative and qualitative research

Planning	Quantitative	Qualitative
Theory-research relationship	Structured, logically sequential-phases deduction (theory precedes observation)	Open interactive Induction (theory emerges from observation)
Function of the literature	Fundamental in defining theory and hypotheses	Auxiliary
Concepts	Operationalized	Orientative, open, under construction, naturalistic approach
Role of subject studied	Active	Passive

	Quantitative	Qualitative
Data Collection		
Research Design	Structured, closed, precedes research	Unstructured, open, constructed in the course of research
Representativeness	Statistically representative sample	Single cases, not statistically representative
Recording instrument	Standardized for all subjects: Objective data matrix	Varies according to subjects' interest, tends not to be standardized
Nature of the data	'Hard', objective and standardized (Objectivity vs. subjectivity)	'Soft', rich and deep (depth vs. superficiality)

	Quantitative	Qualitative
Data Analysis		
Object of the analysis	The variable (analysis by variable, impersonal)	The individual (analysis by subjects)
Purpose of the analysis	Explain variation (variance) in variables	Understand the subjects
Mathematical and statistical techniques	Used intensively	Not used

	Quantitative	Qualitative
Production of Results		
Data Presentation	Tables (relationships perspectives)	Extracts from interviews and texts (narrative perspectives)
Generalizations	Correlations, Causal models, Laws, Logic of Causation	Classifications and typologies, ideal types , Logic of classification
Scope of results	Generalizability	Specificity

Qualitative research takes much longer, requires greater clarity of goals during design stages, and cannot be analyzed by running computer programs. Qualitative research refers to the meanings, concepts, definitions, characteristics, metaphors, symbols and descriptions of things. Quantitative research refers to counts and measures of things.

The Quantitative Research Process

Theory

The starting point of quantitative research process. Theories in social sciences can vary between abstract general approach and fairly low-level theories to explain specific phenomena. Low level theories are also called middle-level theories that stood between general abstract general theories and empirical findings.

Hypothesis/hypotheses

Once a theory is formulated researchers are likely interested to test it. Hypotheses very often take the form of relationships between two or more entities.

Operationalization of concepts

In order to assess the validity of a hypothesis, it is important to develop measures of the constituent concepts.

Selection of Respondents or Participants

The researcher must find the relevant people to whom the research instrument that has been devised should be administered.

Setting up a research design

There are two types of basic research design that are employed by psychologists and sociologists. Psychologists tend to use experimental design. Sociologists tend to use survey/correlational design where there is no manipulation of subjects. The researcher does not always have a choice regarding which of the two designs can be adopted. However, there are areas of research in which topics and hypotheses are addressed with both type of research design

Collect Data

The researcher collects data by interviewing, questionnaire, observation, etc.

Analyze Data

Describing participants in terms of the variables derived from the study

Findings

If the analysis of data suggests that a hypothesis is confirmed, this result can be fed back into the theory that prompted it. The refutation of a hypothesis can be just as important in that it may suggest that the theory is faulty.