

Middle Range Theories as Coherent Intellectual Frameworks

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Abstract: The argument is advanced that sound logical reasoning is essential in understanding the complex concept of middle range theories. This may be explainable as follows: firstly, that epistemological rules and principles are wider and incorporate under to incorporate such concepts as generalization; theoretical paradigms; empirical theories; formal theories; and intellectual theoretical and conceptual frameworks: major premise designated as B. Secondly, that middle range theories have three sets of meanings: called minor premises designated as B1; and these three sets of meanings are: (a)theoretical paradigms as forms of middle range theories are the basic sets of assumptions ideas and unified viewpoints: called minor premise B2; (b) empirical theories as forms of middle range theories as forms of middle range theories are conceptual models of analysis: minor premise B3; (c) formal theories as forms of middle range theories, designated as minor premise B4. (d) Therefore, minor premises B1, B2, B3 and B4 are related to B, major premise. Thirdly, the broader epistemological rules and principles thus incorporate the middle range theories as coherent intellectual frameworks. The latter aspect forms the subject of this article.

Keywords: middle range theories, theoretical paradigms, empirical theories, formal theories, and coherent intellectual frameworks.

Purpose of article

This article is intended to:

- define the concept ‘middle range theories’
- show types of middle range theories
- demonstrate that middle range theories are forms of generalizations
- explain middle range theories as coherent intellectual frameworks.

Meanings, types and kinds of middle range theories

Firstly, the most quoted social scientists relevant to this article include:

- | | | |
|----------------------|------------------|------------------|
| • R. B. Smith | • Veron van Dyke | • David Easton |
| • S. B. M. Marume | • Thomas S. Kuhn | • Robert S. Lynd |
| • Paul H. Lazarsfeld | • R. K. Merton | • Arnold Brecht |

Secondly, before meanings of this important concept can be given it is necessary to show the following:

Bits of data, specific facts, more general facts, singular propositions, low – level propositions, narrow or part – theories, are all legitimate forms of middle range theories and inferentially, therefore, are componental parts of epistemological rules and principles. [Source: S. B. M. Marume PhD thesis: 1988]

Thirdly, the concept of middle range theories may imply three meaning as: theoretical paradigms; *empirical theories*, and *formal theories*. [Source: R. B. Smith: 1983]

Fourthly, the objectives of theories: are stated as:

Many social scientists maintain that middle – range theories are today needed in the social sciences and in the humanities in order to *guide empirical inquiry* and *to provide focus for the consolidation and codification of empirical experimentations and research findings*. In order to understand this, it is necessary to have a clear meaning of the concept middle range theories. In fact the question is: *what is meant by middle range theories?*

Fifthly, to appreciate the complex terminological and semasiological problem associated the complex terminological and semasiological problem associated with the meaning of the concept middle range theories, it may be useful to make the following quotation:

Until the social scientists can produce their own special semasiologists, tales of scientific precision, objectivity and neutrality will always glorify the natural sciences. [Sources: S. B. M. Marume: 1988 and 2015]

Clarity and unambiguity of all terms used in a study are the first requirements of logical reasoning [Arnold Brecht: 1967:57].

Meanings of middle range theories

Professor R. K. Merton's meanings

By the concept of *middle range theories*, one of the leading sociologists, **Robert K. Merton** (1964:5-6), understands 'theories intermediate to the minor working hypotheses evolved in abundance during the day routines of research, and the all – day inclusive speculations comprising a master conceptual scheme from which it is hoped to derive a very large number of empirically observed uniformities of social behaviour'.

Three meanings and three – typologies

In **R. K. Merton's** famous sociological writings, *three meanings* and *three typologies* are implicit in the *concept of middle range theory* as follows:

First, it is *synonymous* with the notable concept of *theoretical paradigm* which refers to the basic set of assumptions, ideas, and unified viewpoints that affect the way scientists of a given tradition view and deal with the empirical social world [R.B. Smith: 1983:1] *This means that theoretical paradigms are aspects of middle range theories.*

Second, it refers to *empirical theories*, providing a test of the adequacy of a paradigm's conceptual framework. In the empirical research phase of cumulative social science, the primary concern is the assessment of the extent to which the categories of analysis and interrelationships among these concepts fit the facts of the empirical social world. In most instances of *empirical research a reciprocal interplay* occurs between *concepts* and *data* [Smith:1983:1-2]. *This means that empirical theories as conceptual models of analysis are again aspects of middle range theories.*

Third, it refers to *formal theories*, which are most thoroughgoing and detailed analyses of the *logical structure of formal middle-range theory*. They indicate, by both precept and detailed example, how special theories have been consolidated into successively enlarged sets of theory.

The formal middle-range theorist analyzes these empirical social facts, inventing explanatory theories that account for the empirical relationships. This means that formal theories as theoretical frameworks are again aspects of middle range theories.

Explanations of middle range theories

R. B. Smith [p.xvi] lucidly writes: "The chapter on basic research is the first because it provides examples of cumulative social science and develops this strategy as a process that includes theoretical paradigms, exploratory and then, more focused research, and, finally, the development and testing of formal, middle range theories."

R. K. Merton [1967:68], one of the leading sociologists, states: "Theories of the middle range consist of limited sets of assumptions from which specific hypotheses are logically derived and tested by empirical investigations."

Merton [1964:5- 6], suggests that social sciences should employ theories of the middle range. By these he understands theories intermediate to the minor working hypotheses evolved in abundance during the day to day routines of research, and the all inclusive speculations comprising a master conceptual scheme from which it is hoped to derive a large number of empirically observed uniformities of social behaviour.

Characteristics of middle range theories

These theories are written in various languages, including plain English and other national languages, flow charts and systems diagrams, simulation schemes and languages for computer programmes and mathematics [Smith:1983:2-6].

a. **Substantive middle – range theories** pertain to limited subject areas, employ less abstract terms, and are bounded by the specific time and place of the empirical study. More general middle range theories which are considered to be universally applicable, are more abstract, and hold regardless of the time and place of the empirical study.

b. Theories tend to be confirmed when newly gathered empirical data are consistent with predictions derived from the theory.

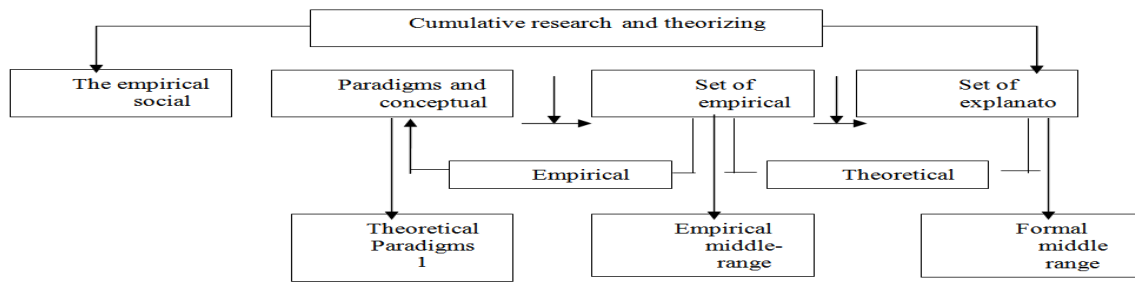
c. If these data are inconsistent with the predictions, then the theory is re-examined. Reexamination provides the stimulus for the cumulative development of a new theory, new tests of the new theory, and further revisions.

Further relevant explanations of the concept of middle range theories

The **three meanings, types and kinds of middle-range theories** have been identified as:

a. **Theoretical paradigms**; b. **empirical theories**; and c. **formal theories** [Smith:1983:2-7]. These are elaborated further in order to give the necessary adequate and respectable detail as integral components of the epistemological rules and principles.

Figure 1/1: Shows a strategy for middle – range theorizing in the social sciences



R. K. Merton believes that theorizing and social research should be cumulative, that successive empirical studies should *refine* and *elaborate* developing *theoretical paradigms*. This process of cumulative research provides the key to understanding the *diverse meanings* of middle-range theory. Combining ideas from **Merton** and **Piotr Sztomka**, a Polish sociologist, this process is diagrammed in Figure 3/1. In this process the empirical social world is studied in **two phases**, the *empirical* and the *formal-theoretical*.

- The *empirical* phase *begins* with paradigms and *ends* with the *production of empirical middle range theories*.
- *The formal-theoretical* phase begins with these empirical studies and ends with the development of *formal middle-range theories* that explain the structure of the empirical data. This strategy for cumulative research and middle- range theorizing leaves open the possibility of general theory. In the future general theorists may develop more abstract theories [comprehensive, unified theories] that will include the middle-range theories as special cases.

Additional comments on the process of cumulative social science research:

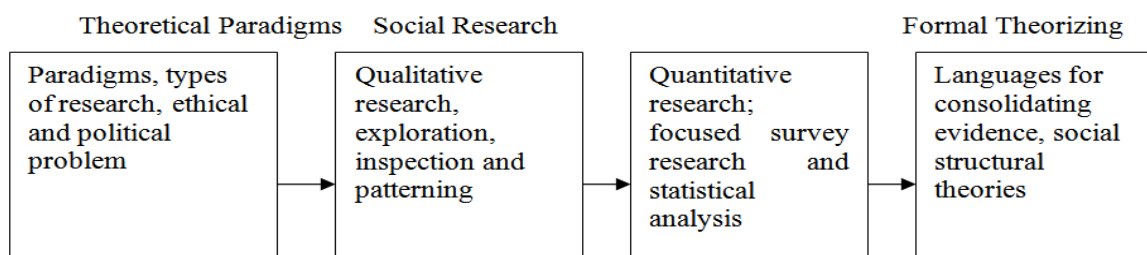
R. B. Smith [1983:1-7] succinctly states that:

Cumulative or normal social science is firmly based upon one or more past social scientific achievements, achievements that some particular group of social scientists acknowledge for a time as supplying the foundation for further research. This process of cumulative social science, if followed more widely, will become highly cumulative and more successful in their aim, which is the steady extension of the scope and precision of social scientific theories. Such theories will make possible a more creative social science, that is, a social science in which anomalies between formal theories and empirical discoveries create a crisis and a transition to a new theory that is more adequate to the subject matter being studied.

This process unfolds as follows: Briefly, theoretical paradigms are basic sets of assumptions, ideas and unified viewpoints that more or less fit some aspects of the empirical social world. Paradigms point out significant problems; provide conceptual models, and concepts for analysis, and specify criteria for the evaluation of the quality of scientific work. Paradigms guide *exploratory, focused, and theoretical research*, explained as follows:

- *Exploratory research* is the firsthand observation of the empirical social world. It is often based on qualitative data such as field notes, diaries, and field interviews. It has two objectives: (a) to orientate the researchers with the field of study, and (b) enable researchers to develop and sharpen theoretical paradigms, that is, intellectual frameworks.
- *Focused research*: strives for *rigorous empirical analysis* and corroboration of findings.
- *Theoretical paradigms* are the end-products of focused research, more adequate and a consolidated, organized, system empirically sound relationship between the variables under analysis – a *middle-range empirical theory*.

Figure 1/2: Illustrating the process of cumulative social science research



Findings from social research: provide a foundation for the development of formal theories. The process of theoretical social science involves at least **four** interdependent operations:

- a. The consolidation of findings from previous theoretical and empirical studies pertinent to the theory building task;
- b. The **reconceptualization** of these variables and their synthesis into a middle-range casual system or formal theory written in a verbal, logical or mathematical language.
- c. Confirmatory research, that is, the derivation and testing of logically deduced implications from the formal theory; and
- d. The modification and trimming of the theory and the underlying theoretical paradigm to account for any anomalous empirical facts.

Need for logical reasoning in establishing relationship between middle range theories and epistemological rules

To understand properly this section of the article, a sound logical reasoning is essential. There is a *scientific relationship* between *middle range theories* and *epistemological rules and principles*. This may be explained as follows:

Point 1, epistemological rules and principles incorporate such concepts as **middle range theories, generalizations, theoretical paradigms, empirical theories, formal theories**, intellectual theoretical and conceptual frameworks: major premise called B.

Point 2, middle range theories have three sets of meanings: called minor premises B1. Three sets of the meanings are:

- **theoretical paradigms** as aspects of middle range theories are basic sets of assumptions, ideas and unified viewpoints, minor premise called B2
- **empirical theories** as forms of middle range theories are *conceptual models of analysis*: again called minor premise: B3
- **Formal theories** as forms of middle range theories are *theoretical frameworks* again known as minor premise: B4
- Please note that minor premises: B1, B2, B3 and B4 are in some way related to B which is our major premise. Therefore, using this kind of reasoning, middle range theories as forms of generalizations are components of epistemological rules and principles. This article restricts itself to examining middle range theories as coherent intellectual frameworks. These are examined as follows

Middle range theories as forms of generalizations.

We dwell here on what the *social scientists* generally call the *middle range theories*, meaning the theories which lie between the minor but necessary working propositions and hypotheses that manifest themselves in abundance during daily scientific research and the all-inclusive systematic efforts to develop a generally acceptable, coherent, comprehensive theory that should explain all the empirically observable uniformities of economic organization, and social changes with regards to this field of study [R. B. Smith:1983:1].

What is true of public administration as a social discipline is the fact that it does not provide easy and quick fixes, but can at best give a reasonably realistic solid factual foundation to work from.. at least as both public administration scientists, and practitioners, we do not have to sit leisurely in our armchairs and speculate about what is happening around us. [Adapted by S. B. M. Marume, September 1988 from the original contributions of Herbert A. Simon – one of the leading 20th century American public administration scientists on decision making theory]

What we must do in modern life is to *participate purposefully* in and dynamically in carrying out scientific research. In this connection it is pertinent to refer to *two leading sociologists*, namely, *Robert K. Merton and Paul F. Lazarsfeld*; and also to two prominent political scientists, namely *Vernon van Dyke and David Easton* in order to obtain *semantical clarity* of the concept of ‘*middle range theories*,’ *R. K. Merton and P. F. Lazarsfeld* were preeminent partners and scholars at the Columbia University department of Sociology, which was very influential in American sociology from the early 1940s to the mid- 1970s. *R. K. Merton* is a renowned functional *theorist* and *P. F. Lazarsfeld* was a notable *methodologist*. Of special interest to us is one of their scholarly contributions to basic research, that is, their *scientific conception of the middle range theories* [R. B. Smith:1983:1-6].

The significance of middle range theories:

Middle range theories are today needed in the social sciences in order to guide empirical enquiry and to provide focus for the consolidation and codification of empirical findings from the numerous basic, applied, and policy studies of the past decades.[Source: R. B. Smith: 1983: 1]

a. Professor Dyke's contributions

According to Vernon van Dyke: 1966:20-21; 90-91, and 194], *explanatory principles* vary from a very low to a very high level of generality. There is a scale of generalizations ranging from low-level generalizations, depending on the number of phenomena or variables to which the generalizations are applicable, and on the extent to which the phenomena are found to have a specific regular relationship to one another. He further contends that the construction of a scientific system of knowledge concerning any subject may be represented as a pyramid which rises from a base, consisting of specific bits of data, specific facts, more general facts, singular propositions, low-level propositions, high-level propositions, and from there to low level theories to laws and highest theories. The *apex* of this pyramid represents the comprehensive general theory, which is posited as the highest ideal of scientific endeavour.

b. Professor Merton's contributions

Here Merton is saying that the social sciences should work with theories of limited range. Not only should social scientists present facts, they should also blend those facts into a theory – a theory which should not, however, be a generalizing one aimed at covering the whole range of human societal existence. It should deal with a single aspect only, that is, should be extended or generalized in respect of only a single aspect of human societal existence.

What Professor Merton says of the concept of 'middle range theories appears to be consistent with the views of *Professor Veron van Dyke* [Political science: A philosophical Analysis: 1966:20-21, 102 and 194] that the construction of a scientific system of knowledge concerning any subject may be represented as a pyramid which rises from a base, consisting of specific bits of data to more general facts and from there to propositions, medium or intermediary or part theories, laws and theories.

The apex of this pyramid represents the comprehensive general theory which is pointed as the highest is the ideal of scientific endeavour.

The role of propositions and hypotheses

We examine the role of propositions and hypotheses progressively as shown below.

The term hypothesis

According to Goode and Hatt [1952:118 – 119], an hypothesis is a tentative generalization the validity of which has still to be proved. Subsequent investigations must either confirm or reject the hypothesis.

The purposes of an hypothesis

First, an hypothesis guides the study. It enables the researcher to narrow the field of his investigation and it helps him to focus squarely on the area of study. An hypothesis sharpen the abilities of the social scientists. The researcher scientists develop further operative hypotheses in the processes of his studies.

Second is the development of theory

Once proved to be true and valid an hypothesis becomes a theory, a general statement, and, therefore, a generalization.

A theory is a systematic body of generalizations of descriptive, explanatory and predictive value. Every field of study requires the development and use of theories of analysis and comprehension of the phenomenon in that field. The human mind is incapable of encompassing the objective reality of all the data involved and the meaning of that data in such complex fields as international politics, political science, strategic studies, public administration, and so on. Human perceptions of reality are both incomplete and approximate. Theories of international public administration, and so on by concentrating on certain phenomena, certain perceptions, and certain judgement, provide only a simplified and more comprehensible approximation of reality or a significant segment of the larger reality. These theories, hopefully, will aid the scholar to be an informed member of the public:

- in the choice of methods and techniques to be used in the study;
- in the selection and utilization of data;
- in providing meaning;
- in explaining the data and phenomena involved;\in providing further hypotheses; and
- in suggesting techniques for testing the reliability and validity of the hypotheses.

The best or most powerful theories are those perceived to possess the greatest and best descriptive, explanatory and predictive values.

Third is the comment on various kinds of generalizations found in the.

Low – level to high – level theories/generalizations

What we examine here are cases of middle range theories. At the present time, the explanatory principles vary from a very low to a very high level of generality.

According to Veron van Dyke, [1966: 20 – 21] before we generalize, we classify. We put items possessing shared attributes into one category. A generalization is then a statement that is true of two or more items in the category. When a statement is true of only a very few items in the category, it is said to be at a low level of generality; the more items to which it applies, the higher the level of generality. If an item is in a class by itself,

a statement concerning it would be particular rather than general. This means that statements of a low level of generality have little significance in their own right unless they contribute to higher levels of generalizations.

Fourth represents the scale of theories and generalizations

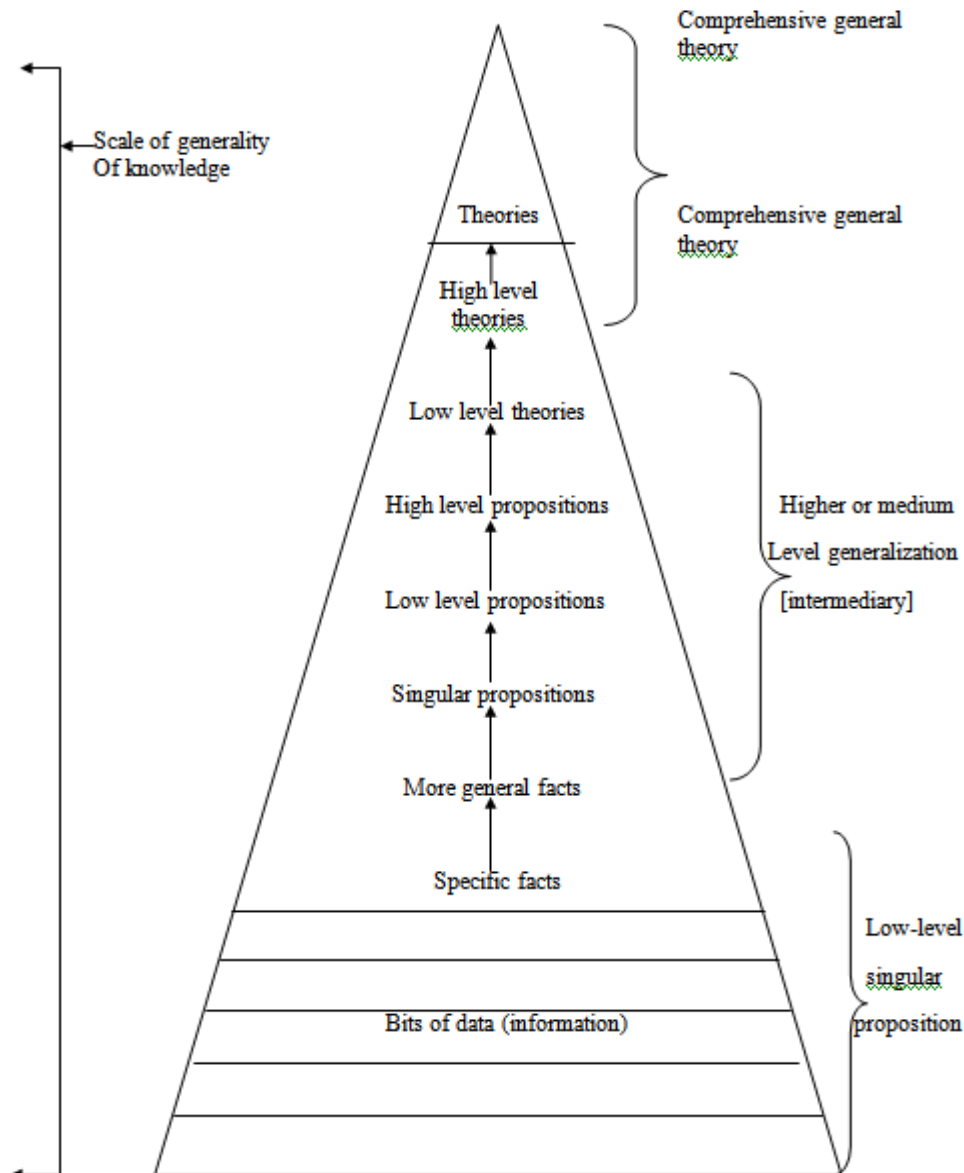
Here again are clear cases of middle range theories more closely illustrated in various types of theories of the social sciences: specific bits of data at the bottom; specific facts and specific statements; general facts; propositions; hypotheses and general statements; short – lived theories and middle range theories; generalizations; probabilistic laws and laws; and university theories. The apex of this pyramid represents the most comprehensive, comprehensible, coherent, valid, final, self – correcting, general and universal theory which is posited as the highest ideal of scientific endeavour.

We can now return to pyramidal representation of the different degrees or extent of knowledge, and completing the subdivision to illustrate it as follows:

Conclusion on middle range theories as forms of generalizations

Our generalizations are made up of various degrees of knowledge ranging from elementary or low-level propositions and hypotheses and theories through intermediate or high-level theories to highest level or general theories. The distinction between *general theory* and *all other theories* consists in the scope or generality of the particular object and the extent of the coherence or interrelationship it reveals. The *scope* refers to the range of the subject to which the theory relates, whether it embraces a limited amount of data or covers a very wide field, whilst the *coherence* of a theory refers to the degree of fixity of the various constituent propositions.

Table 1/3 on voluminal scale of knowledge

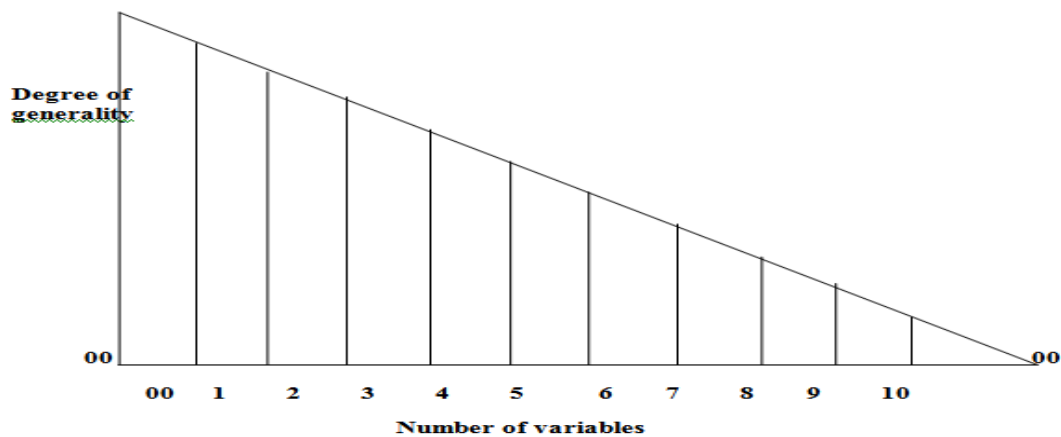


At the same time the above pyramidal representation of the different degrees of knowledge serves as a barometer of the extent of the degrees of our knowledge. We have more low levels than high levels of knowledge.

Measured on the scale of generality the degree of our knowledge varies from low grade to high grade in accordance with the decrease in the number of variables of phenomena on which it is based or which are used as building stones for constructing generalizations.

Compare the graphic representation below:

Table 1.4 degree of generality and number of variables



From the foregoing, therefore, there is a scale of generalizations ranging from very low levels of generalizations to higher levels and to the highest levels of generalizations, depending on the number of phenomena or variables to which the generalizations are applicable, and on the extent to which the phenomena are found to have a specific regular relationship to one another. However, the observation is made that there are:

- a. numerous almost countless specific bits of data;
- b. many specific facts and specific statements;
- c. few general facts;
- d. fewer propositions, hypotheses and general statements;
- e. a considerable number of short – lived theories and middle range theories;
- f. A smaller number of generalizations;
- g. Very few probabilistic laws and laws; and
- h. One of two universal theories at the ultimate levels of generalizations.

There are, therefore, more cases of middle range theories than there are of higher levels of theories.

Fifth is the scale and state of generalizations in social research studies

Ultimate goal of public administration theory:

The systematic and rationale construction of a scientific system of knowledge concerning any political subject, for example, political science, international politics, strategic studies, public administration, municipal government and administration, and public management, may be represented as a pyramid which rises from a base consisting of numerous specific bits of data to more general facts, and from there to fewer propositions and hypotheses, principles, laws, probabilistic laws, and universal theories. The apex of this pyramid represents the most comprehensive, comprehensible, coherent, self correcting, valid, final universal and general theory – which is posited as the highest ideal of scientific endeavour. This ideal is the ultimate goal of well researched, rational, comprehensive theory in the social sciences. And examples of social sciences are public administration, political science, international politics, strategic studies, municipal government and administration, sociology, economic, psychology, anthropology and so on.

On the strength of the above criteria, Professor *David Easton: 1979:7-8*] distinguishes **three** categories of theory, namely, **singular generalizations; low-level, narrow or part-theories; and general theories**. These categories of theory are in effect legitimate forms of middle range theories in the social sciences.

From the foregoing exposition it is clear that bit of data, specific facts, more general facts, singular propositions, low-level propositions, narrow or part-theories **are all legitimate forms of middle – range theories**, and inferentially, therefore, are legitimate component parts of epistemological rules and principles. Therefore, middle range theory arte legitimate evidence of epistemological rules and principles.

Middle range theories as theoretical models of analysis

Epistemologically, middle range theories also *refer to coherent theoretical models of analysis*. And the **three meanings of middle range theories** are again discussed in order to scientifically show their close relationships with the *epistemological rules and principles*.

We provide further brief illustrations on the **three meanings and typologies of the concept middle-range theory**: (a) theoretical paradigms, (b) empirical theories, and (c) formal theories as follows:

Theoretical paradigms the basic set of assumptions, ideas and view points

Firstly, *theoretical paradigm* refers to the *basic set of assumptions, ideas and viewpoints* that affect the way scientists of a given tradition view and deal with the empirical social world [Smith:1983:1 – 4].

Secondly, paradigms provide a general context for systematic research by progressively steering the scientist to what are considered pertinently relevant problems and providing concepts useful for the interpretation of data and the development of working propositions and hypotheses. Theoretical paradigms quite often include *conceptual models* as a significant part. These single out portion of the empirical social world for close scrutiny, providing categories for the interpretation of empirical facts and a focus for empirical inquiry [Smith:1-4].

Characteristics of theoretical paradigms

In attempting to understand more about theoretical paradigms, we have come across a number of interesting findings. Here are some of the examples.

The current emphasis in social sciences upon techniques and precise empirical data is a healthy one; but...skilful collection, organization, and manipulation of data are worth no more than the problem to the solution of which they are addressed. [Source: Robert S. Lynd: Knowledge of what? 1939]

What actually prompted a man to do research?

This is better answered by the following quotation:

A man may be attracted to science for all sorts of reasons. Among them is the desire to be useful, the excitement of exploring new territory of knowledge, the hope of finding order, and the drive to test established knowledge....Finally, at a still higher level, there is another set of commitments without which no man is a scientist. The scientist must, for example, be concerned to understand the world and to extend the precision and scope with which it has been ordered. That commitment must, in turn, lead him to scrutinize either for himself or through colleagues, some aspect of nature in great empirical detail. And if that scrutiny displays pockets of apparent disorder, then these must challenge him to a new refinement of observational techniques or to further articulation of his theories. [Source: Thomas S. Kuhn: The structure of scientific revolutions, 1970]

The aim is to clarify the function and nature of theoretical paradigms in the process of normal social science. Cumulative social science means social research and theory development that is focused on specific substantive or theoretical problems are that studied in depth so that successive studies refine and elaborate the structure of the problem. Cumulative social science may begin with original, sensitizing conceptual thinking or research, but it more often involves social research and theorizing based upon one or more past achievements.

Five interrelated dimensions of theoretical paradigms

According to R. B. Smith [1983:21-45], the concept of *theoretical paradigm* is better explained in terms of **five** interrelated dimensions; namely, generic propositions; commitment to theoretical models; values; research exemplars; and theories.

Scientific communities and theoretical paradigms in social research studies:

a. Scientific communities

According to Smith [1983:20] scientific research is practiced by loosely organized groups of researchers and practitioners who share the same scientific specialty. These groups of scientists have been called *scientific communities, invisible colleges, theory groups, networks and schools*. Members of a particular scientific community are likely to have received similar scientific education, to work on similar research problems, to cite one another's books, to know one another personally, and to be influenced by the same senior scientists, or same senior lecturers/ professors.

There are numerous scientific communities within the various disciplines comprised by contemporary social sciences. Because these groupings do not share a common theoretical paradigm, there often are interdisciplinary disagreements about the relevance and quality of scientific work. But within each grouping communication is relatively easy and full, and professional judgments are fairly unanimous, because the scientists share a common theoretical paradigm, a common professional world view. This theoretical paradigm is fitted to salient aspects of the empirical world which the groups of scientists study [Smith:1983: 20].

b. Operational theoretical paradigms:

Theoretical paradigm refers to the basic set of assumptions, ideas and viewpoints adopted by a scientific community in a particular historical phase. *Theoretical paradigms are coherent unified viewpoints that affect the way scientists of given tradition view and deal with the world.* The chief function of these paradigms is to provide a general context for research by steering the scientists to what are considered relevant problems and providing concepts that aid to data interpretation and hypotheses formulation [Smith:1983:20].

According to Smith [1983:2,20 and 21], theoretical paradigms identify challenging puzzles, supply clues to the solution, help the scientist to determine what might be a legitimate piece of evidence, and guarantee that a truly clever practitioner will succeed.

c. Brief comments on the five interrelated dimensions

There are numerous theoretical paradigms in the social sciences, for the most part each focuses on a different aspect of the empirical social world. But regardless of social scientific discipline or school, theoretical paradigms in contemporary social science can be organized by *five interrelated dimensions*. These *sub-components of the paradigm concept* are: generic propositions; commitments to particular theoretical models; values; research exemplars; and theories [Smith:1983:20 – 45].

1. Generic propositions

The various theoretical paradigms abound with generic propositions. There are orienting prescriptive statements to a particular paradigm to problems considered urgent and relevant. These generic propositions, and others, provide contexts that point out types and kinds of variables the analyst should take into account. In this way generic propositions provide a focus for conceptual thinking and more empirical research.

2. Commitment to theoretical models

Every theoretical paradigm has as its foundation some sort of metaphysical, metaphorical, or heuristic theoretical *model* that is relevant to the substantive reality it deals with. Some analysts truly believe in the existence of their models; these are metaphysical models, accepted on faith. Others merely employ models as heuristic devices because they are useful tools for analysis.

They help determine what will be considered a relevant problem, an acceptable solution and competent work.

3. Values

Cross-cutting the substantive distinctions between the various scientific communities are commitments to different values. These differences in values affect the judgments and preferences of social scientists, often producing lively debates between adherents of different value-orientations. Three such polarities are identified as:

- value neutrality versus an active social science;
- qualitative versus quantitative methods; and
- inductive - grounded theory versus logico- deductive theory.

a. Value neutrality versus an active social science

A recurrent controversy in the social sciences concerns the role of values in guiding and shaping the products of social science research. Paradoxically, some social scientists believe in doing value-free research; whilst others support an active, involved stance.

Value-free social research scientists: Thus, according to this school of thought, social scientists as scientists had better confine themselves to three tasks.

First and foremost, they should devote themselves to developing reliable knowledge of what alternatives of action exist under given conditions and the probable consequences of each.

Second, social scientists should, as a legitimate part of their technology as well as for its practical uses, be able to gauge reliably what the masses of people want under given circumstances.

Third, they should, in the applied aspects of their science, develop the administrative or engineering techniques of satisfying most efficiently, effectively and economically these needs and wants, regardless of what they may be at any given time, regardless of how they may change from time to time, and regardless of what the scientists own preferences. Scientists may then in their capacity as citizens join with others in advocating one alternative rather than another, as they prefer.

Associated terms include: *objectivity* and *value-neutrality* and the development, articulation and testing of scientific theories.

Criticisms

This is probably a contradiction in terms since these types of research are inherently not value free. As usually practiced, policy research is concerned with assessing consequences and devising alternatives to social mechanisms, but it includes the recommendation and partisan advocacy of the alternatives thought to be better.

Research is not completely value-free, for it is conditioned by the implicit values of the scientists. Basic research requires that the researcher be committed to the values of science. Moreover, other values implicit in the scientist's paradigm influence the choice of what problems to study and what theories to develop.

An active social science_thus, according to this school of thought values may be and are properly and necessarily applied in the preliminary selection of significant and important problems for research. In its view a research is important and significant to the extent that it is related to deep, more widely based, cravings which living (democratic) personalities seek to realize. Once a problem is selected, however, values should not be allowed to bias one's analysis or interpretation of the data. In essence, the school advocates a scientifically rigorous social science directed upwards enhancing democracy, freedom, and opportunity.

Admiration of scientific thoroughness, and objectivity: however, both scholars agree on the need for *thoroughness* and *objectivity* in the analysis of data for the nonalignment of social science with political parties' or party lines, because this leads to an attenuation of objectivity.

b. Qualitative versus quantitative methods

For some social researchers both African and European the *qualitative* versus *quantitative* distinction is a source of great controversy.

- Some social researchers prefer the rich descriptions and new insights that can be obtained from qualitative field methods, detailed interviews, and documentation. But some qualitative social researchers reject quantification.

- Contrariwise, some quantitative social scientists, equally myopic, ignore the many virtues of qualitative studies.

- But there are some social researchers who value the articulation and integration of qualitative and quantitative methods in the social studies.

- What is needed is a legitimate return to the empirical social world: which implies that there are three points of comparison between *qualitative* versus articulated qualitative and *quantitative* methods:

- Adequacy of treatment to the reality being studied;

- exploration versus corroboration and elaborations; and

- *qualitative methods* versus articulation of qualitative and *quantitative methods*. These *two schools of thought* agree that concepts and research methods must be adequate to the reality being studied. In order to understand social reality one must have detailed knowledge of the social setting and must use concepts that fit.

This multimethod approach [multimethodism] enables the analyst to view the many facets of a complex phenomenon from different points of view. This qualitative and quantitative method may have their unique advantages and disadvantages, but each methodology tends to complement the other and both are best when articulated and integrated. Preferably, these methods may be articulated at the same time in the same research study as suggested by the process of cumulative social research first qualitative social research and generation of theory, then elaboration and corroboration of qualitative findings and theories by focused, quantitative social research.

c. Inductive, grounded theory versus logico-deductive theory

- Another lively debate pivots around the formulation of strategies for grounded theory and their polemic against logico- deductive theorizing.

- By grounded theory we mean the discovery of theory from data, data systematically obtained and analyzed in the process of comparative social research.

- By *logico-deductive theory* we mean analytic propositions and conceptual models that theorists derive from the generic propositions and hypotheses and conceptual models of their theoretical paradigms. The analytic categories are designed to organize empirical data, and the theoretical propositions and hypotheses are to be tested in verificational studies. Both of these applications are usually carried out by researchers other than the theorists.

- The strategies of the two schools of thought are not necessarily in competition; each is the complement of the other. The grounded theory strategy is most appropriate for the earlier stages of a research programme, the logio- deductive strategy is most appropriate for the later stages.

4. Research exemplars

The recent explosion of interests in structural equation and log-linear modeling and estimation, the resurgence of qualitative research, and the development of maverick theoretical perspectives may tend to overshadow the viable definitions of cumulative social science developed so far. These definitions are pertinent today because they provide a means for reconciling the breakdown in consensus about the core of social knowledge and methodology.

The multiple theoretical paradigms in the social sciences call for a simplification and systematic synthesis that will allow freedom of inquiry whilst, at the same time, providing a methodological convergence that is common to the various theoretical paradigms. This process of cumulative social science provides the much needed convergence, as evidenced by classic and recent exemplars of cumulative research and formal theorizing.

Classic examples of cumulative social science

Four classic examples of research programmes include most phases of this process. The first two: the social influence and Columbia University voting studies; first shaped this conception of cumulative social science. The studies of relative deprivation and of interaction in social groups also follow this pattern, as do many other research programmes.

These four research programmes [namely, research programme; exploratory research; focused research; and confirmatory research] exemplify the four sociological paradigms mentioned earlier. The socio-psychological studies of social influence represent a micro-functional perspective since they are directed towards explaining how groups function to maintain uniformity of opinion. Additionally, the key concept, group cohesiveness, is constructed, so that each of its dimensions has similar consequences for social influence.

5. Recent theories

Many recent developments in social theorizing have involved the application of: path analysis, structural equations and econometric methods, and log linear models to the analysis of social research data.

These techniques have been characterized as revolutionary because they allow theory and research to be combined in one operation.

The analysis often follows an incremental strategy of model development in which a simple model is successively developed and elaborated, resulting in a very complex model of the phenomena.

Synopsis of the theoretical paradigms as coherent intellectual frameworks

Briefly stated, theoretical paradigms are indeed basic sets of assumptions, ideas and unified viewpoints that fit some aspect of the empirical social world. Paradigms point out significant problems, provide conceptual models for analysis, and specify criteria for the evaluation of the quality of scientific work.

Empirical middle range theories as conceptual frameworks:

Secondly, empirical research provides a test of the adequacy of a paradigm's conceptual framework. In the empirical research phase of cumulative social science a primary concern is the assessment of the extent to which the categories of analysis and interrelationships among these concepts fit the facts of the empirical social world. In most instances of empirical research an interestingly reciprocal interplay occurs between concepts and data. The former [concepts] direct the gathering of new data, the latter [data] direct the development of new concepts. Empirical relationships among these concepts and data develop from this process, resulting in research studies that in turn intertwine middle range concepts and their empirical interrelationships. [Smith:1983:4-5].

Formal middle-range theories as theoretical frameworks:

Thirdly, the formal middle-range theorist analyzes empirical social facts, inventing explanatory theories that account for the empirical relationships.

The formal theorist especially the structural theorist strives to develop a system of theoretical relationships that will reproduce the structure of the empirical data and produce new deductions that can be tested against other data. The theory produces as output theoretical value of dependent variables. If the theoretically derived values of not correspond to the empirical structures, or if the deductions from the theory are inconsistent with new empirical data, then the theory is disconfirmed and a new one must be devised and tested. [Smith:1983: 5 – 7].

Middle range theories as both conceptual and theoretical models of analysis

Thought out systematically and comprehensively middle range theories can be regarded as both conceptual and theoretical models of analysis which can again designated as generalizations.

Middle range theories as coherent intellectual frameworks

Summary and conclusion of the concept of middle – range theories in the social sciences

Summary

The concept of middle range theories has been extensively examined and it is now possible to state clearly the following:

What are middle range theories?

From these explanations of this article, by the concept of middle range theories, it is meant: theories intermediate to the minor working hypotheses evolved in abundance during the day to day routines of research, and the all – day inclusive speculations comprising a master conceptual scheme from which it is hoped to derive a very large number of empirically observed uniformities of social behaviour.

Three meanings and three typologies

From the researches three meanings and three typologies are implicit in the concept of middle range theories as follows:

Three typologies:

- Theoretical paradigms;
- Empirical theories; and
- formal theories

Three meanings of middle range theory

First it is synonymous with the notable concept of theoretical paradigms which refers to the basic set of assumptions, ideas and unified viewpoints that affect the way scientists of a given tradition view and deal with the empirical social world. And a theoretical paradigm is better explained in terms of five interrelated dimensions or sub – components; namely

(a) Generic propositions; (b) commitment to theoretical models of analysis; (c) values; (d) research exemplars and (e) theories.

Second, it refers to empirical theories, providing a test of the adequacy of a paradigm’s conceptual model of analysis

Third, it refers to formal theories, providing theoretical frameworks.

Therefore, middle range theories as generalizations are also called coherent intellectual frameworks which have formed the subject of this research paper.

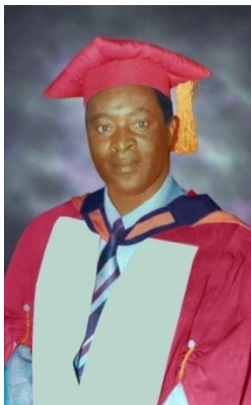
Conclusion

In conclusion, the middle range theories as forms of generalizations are legitimate components of epistemological rules and principles in the social sciences.

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To be able to:

1. Define and explain the concept ‘middle range theories’ in social sciences
2. Describe the characteristics of middle range theories
3. State the functions of paradigms in empirical social research
4. List three typologies of middle range theories
5. Appreciate the role of logical reasoning in establishing a scientific relationship between middle range theories and epistemological rules and principles
6. Explain middle range theories as coherent intellectual frameworks in the context of:
 - a. generalizations
 - b. conceptual and theoretical models of analysis
7. Explain the significance of middle range theories.
8. Describe the term theoretical paradigms in social research
9. List and explain five interrelated dimensions of theoretical paradigms
10. Describe the reasons which prompted a human being in undertaking research work.