A Primer To Social Theory: Towards Understanding Theory Construction And Application In Sociological Discourse

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ABSTRACT: Theory is one of the most important words in the lexicon of contemporary Sociology. Yet, its formation, content and application often create confusion, misrepresentation and miscommunication among its users. Taking it from ontological and epistemological foundations, this paper provided clarity of thought and simplicity of theoretical application in sociological discourse. The paper also discussed the basic strategies of theory construction, its associated forms as well as circumstantial relevance. It is concluded that the business of doing sociology is also the business of theory construction as it serves as basis of logical, functional and reliable understanding, explanation and prediction of social reality.

KEY WORDS: Theory Construction, Forms of Theory, Theory Application, Philosophy

I. INTRODUCTION
Constructing as well as understanding any social theory is seemingly difficult for most people in the academic world. This is so because to theorize implies to deeply have a coordinated thought, just as an outcome of scientific inquiry is a function of applicable thinking. Social scientists try to make sense of society through construction and application of theories. For example, in the discipline of sociology, theories are largely built to explain how society operates and functions. Most theories often get a bad rap just as most people often think of theory as, at best, boring, and at worse, useless. It is therefore important to understand a theoretical foundation for any practical voyage in sociological discourse.

Theories are fundamental building blocks for concrete understanding of social realities. Indeed, the conceptual innovation in the social world is a function of the “construction of theoretical ideas based on empirical data” (Timmermans and Tavory, 2012). Due to the divergent views on the mechanism for theory construction, Hage (2007) in his “The Intersection of Philosophy and Theory Construction: The Problem of the Origin of Elements in a Theory” concludes that “the formula for the construction of knowledge is two-thirds mind and one-third data or to put it other terms, in thinking about new ideas”. This means that in theory construction, both idealistic and realistic philosophical orientations are very important.

For a theory to have global appraisal and application, the strength or otherwise of the theory has to be tested over time and evidence for its reliability and validity must be clearly provided. In this sense, the question on how a theory can be developed has always been on. In addition, theories are meant to understand, explain or predict events and as such some theories are developed to explain or to predict. This makes the entire process of theory construction complicated, just as observed by Schutz (1962) that a “theory which aims at explaining social reality has to develop particularly devices foreign to the natural sciences in order to agree with the commonsense experience of the social world”.

In all, theory construction and its subsequent application provide a platform for basic social discourse as there is a nexus between theory and research. Theories therefore structure and inform sociological research. So, too, does research structure and inform theory. The reciprocal relationship between theory and research often becomes evident to students new to these topics when they consider the relationships between theory and research in inductive and deductive approaches to research (Blackstone, 2012).

DEFINING A THEORY
A theory is an abstract idea with specific form, purpose, qualities and derivatives-but a mental, communicable idea not contained in the form of its representation, but with substance conveyed by its form (McDonald and Schneberger, 2006). Reynolds (1972) defines theory “as an interrelated set of definitions, axioms, or propositions” In his own analysis of a theory, Hage (1972) asserts that a theory should contain not only concepts and statements but definitions-theoretical and operational-and linkages-again both theoretical and operational. Wacker (1998) maintains that a theory must have four basic criteria which are: conceptual definitions, domain limitations, relationship-building, and predictions. These criteria according to Wacker are crucial to the understanding of any theory. This is so because when a theory is constructed, it is expected to provide a framework for analysis, facilitates the efficient development of the field, and is needed for the applicability to practical real world problems. Therefore, to have a good theory, such theory must follow the virtues criteria which consist of uniqueness, parsimony, conservation, generalizability, fecundity, internal consistency,
empirical riskiness, and abstraction, which apply to all research methods. Simply put, Pooleand Van de Ven (1989) state that “a good theory is, by definition, a limited and fairly precise picture”. The theory’s precision and limitations are founded in the definitions of terms, the domain of the theory, the explanation of relationships, and the specific predictions.

According to Nixon (2004) a theory has three principal aspects that are “indispensable resources” for any professional undertaken. These resources represent 1) the analytic interpretation of intent and action 2) the speculative evaluation of alternative courses of actions and 3) the explanatory justification of the principles underlying practice. The analytic interpretation entails that a theory has the capacity to provide conceptual tools to read meaning and intent into our actions and that of others. The evaluative aspect of a theory provides for alternative courses of action and the necessary resources needed for such evaluation. The explanatory justification of a theory establishes a crucial bearing on future policy and practice of what phenomenon being explained. These resources define and project the validity and reliability of any social theory.

On the whole, the operationalization of the definition of theory should directly be tied to the necessary components of theory. These components from academic standpoint to a theory are made up of four namely: definitions of terms or variables; a domain where the theory applies; a set of relationships of variables; and specific predictions about factual claims (Hunt, 1991; Bunge, 1967; Reynolds, 1972).

**PHILOSOPHICAL FOUNDATION TO THEORY CONSTRUCTION**

Theories are built on certain logico-philosophical discussions. Thus, every theory has relationship with some philosophical arguments and positions. Abdulrahman (2014) argues that prowess of any theory lies on its ontological assumption of such theory, emanating from realist and nominalist divide.

While realism in modern philosophy is applied to the doctrine that ordinary objects of sense perception, such as tables and chairs have an existence independent of their being perceived, nominalism holds that abstractions known as universals are without essential or substantive reality, and that only individual objects have real existence. These orientations have influenced the thinking of scholars who explain or predict phenomena based on either abstraction or reality. The debate between the realists and the nominalists began with some ontological issues regarding the nature of the universe. Hughes (1980:6) asserts that ontology basically deals with issues “about what exists in the world”. From the realist point of view, the real world has hard, tangible structures that exist irrespective of our labels. In other words, the social world exists separate from the individual perception of it. However, nominalists assume that social reality is relative, and the social world is mainly names, concepts and labels that help the individual structures reality (Nelson, 1998).

Another major philosophical influence on theory construction is epistemological debate. Blaike (1993) describes epistemology as the science of the method or grounds of knowledge. To Audi (2000), it is the philosophy of knowledge and justification. Epistemology therefore presents a view of what can be regarded as knowledge rather belief as it explores the basis for knowledge-how we know what we know. The epistemological argument has resulted in two sharply divided orientations in the process of constructing a theory. These are the positivist and the anti-positivist approaches.

Positivism assumes that the logic, methods and procedures of the natural sciences can be applied to study the social world. The positivist position is that a science of human behavior is possible just as for instance, Sociology has as much claims to scientific status as Physics, Chemistry, and Biology among others. Auguste Comte (one of the founding fathers of Sociology) once posited that:

> The application of natural science methodology to the study of man would produce a positive science of society. It would reveal that the evolution of society followed invariable laws. It would show that behavior in the social world is governed by laws in the same way as behavior in the natural world (cited in Haralambos, 1980:493).

However, anti-positivism rejects the above claims, stating that the best way of understanding social reality is by observing and experiencing it directly. This orientation also rejects the claim that social science can create true objective knowledge of any kind. On the basis of this argument, many sociological theories such as symbolic interactionism, phenomenology, and ethnography among others have emerged.

The epistemological divide has also reflected on the approach used in data collection for a research which often leads to theory formation. According to Burell and Morgan (1979), these reflections are nomothetic and idiographic theses. On the one hand, nomothetic thesis relies more on the scientific method and testing of hypothesis. It uses quantitative tests such as survey, personality test and standardized research tools, just as it favours the logic of deduction. On the other hand, idiographic inquiry focuses on getting inside a subject and exploring the detailed background and life history. This inquiry believes in the use of qualitative research design.

From the foregoing, it is clear that the realist/nominalist debate has fundamental implication on the construction of sociological theories and in deed, other theories. This philosophical discourse particularly on the nature of human society and existence defines the strength and character of theories whether positivist inclined ones such as Structural functionalism or anti-positivist propelled like Rational Choice theory.

**STRATEGIES OF THEORY CONSTRUCTION**

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McDonald and Schneberger (2006), Timmermans and Tavory (2012), Reynolds (1971) identified the following as strategies of theory construction. They are: Research-Then-Theory, Theory-Then-Research and Composite Approach.

**Research-then-theory**

This strategy is also known as Baconian approach (Reynolds, 1971; McDonald and Schneberger, 2006). This approach emphasizes data gathering which would later culminate into a theory. It is an inductive process of theory construction.

The essential steps for this strategy are:
1. Select a phenomenon and list all the characteristics of it
2. Measure all the characteristics of the phenomenon in a variety of situation
3. Analyze the resulting data to determine if there are any systematic patterns among the data worthy of further attention
4. Formalize the significant patterns as theoretical statements constituting laws of nature

In addition, this strategy is often carried out through qualitative method. This method emphasizes that the study must be holistic, the researcher must be greatly involved in the entire process, and such research must take place within the natural setting. To this end, Reynolds (1971) asserts that the effectiveness of this strategy is a function of two basic conditions namely:
- There should be small number of important variables
- There should be limited number of significant causal relationships

Timmermans and Tavory (2012) maintain that grounded theory has brought to limelight the continued quest for data-based theory construction, and in this sense, “grounded theory has become a dominant data-analytical approach”. This arguably has become a foundation for inductive-driven theory formation.

In his analysis of inductive strategy of theory construction, Blackstone (2012) states that a researcher begins by collecting data that is relevant to his/her topic of interest, and once a substantial amount of data have been collected, the researcher looks for patterns in the data, working to develop a theory that could explain those patterns. Simply put, it is a movement from data to theory or from the particular to the general.

Advantages of this strategy are that it provides a relatively detailed information about the theory since its construction passes through qualitative dimension, and also provides researcher with the understanding (as a goal of science) of the phenomenon under study. However, a lack of agreement on what constitute the most important variables and the theoretical infinity of data to be collected is some of its shortcomings.

**Theory-then-research approach**

McDonald and Schneberger (2006) opine that “good theory and rigor are absolutely required for good research and teaching, and that relevance to practical problems is absolutely required to justify research”. On the basis of this, having a good theory to start with is crucial in this strategy.

Below are the steps to be taken in this strategy:
1. Develop an explicit theory in either axiomatic or process description form
2. Select a statement generated by the theory for comparison with the results of empirical research
3. Design a research project to test the chosen statement’s correspondence with empirical research
4. If the statement derived from the theory does not correspond with the research results, make appropriate changes in the theory or the research design and continue with the research
5. If the statement from the theory corresponds with the results of the research, select further statements for testing or attempt to determine the limitations of the theory.

Based on the above, Reynolds (1971) states that for this strategy to be generally meaningful, the following possible statements should be considered
- Selection of statement that is most likely to be true
- Selecting statement that is most likely to be false
- Selecting statement that is most crucial to the theory.

This strategy is associated with deductive approach to research and theory construction. Blackstone (2012) posits that this strategy begin with a social theory that a researcher finds compelling and then test its implications with data. This simply means moving from a more general level to a more specific one. This strategy to theory construction is the one that people typically associate with scientific investigation. This is why McDonald and Schneberger (2006) opine that “the major focus of this strategy is the development of an explicit theory through continuous interaction between theory construction and empirical research”.

This strategy has the advantage of providing a unity of scientific direction and creates the explanatory goal of science. However, this strategy is somewhat problematic particularly on how to identify the theory to start with. As McDonald and Schneberger (2006) rightly put it “perhaps the biggest problem with the theory-then-research approach is developing the initial theory, either by inventing one or by adjusting or modifying existing theories”.

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For Saunders et al (2007), both deductive and inductive approaches are fundamental for theory construction but understanding their major differences is necessary. Their position on this differentiation is captured in the table below.

<table>
<thead>
<tr>
<th>S/N</th>
<th>DEDUCTIVE STRATEGY</th>
<th>INDUCTIVE STRATEGY</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Principles based on science</td>
<td>The meaning of human attachment events are aimed to be explored</td>
</tr>
<tr>
<td>2</td>
<td>Movement is done from theory to data</td>
<td>Movement is done from data to theory</td>
</tr>
<tr>
<td>3</td>
<td>Causal relationships between variables need to be explained</td>
<td>Research context is understood in a deeper manner</td>
</tr>
<tr>
<td>4</td>
<td>Quantitative type of data is mainly collected</td>
<td>Qualitative type of data is collected</td>
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<tr>
<td>5</td>
<td>Concepts are operationalized in order to ensure the clarity of definitions</td>
<td>More flexible approach structure to ensure provisions for changes during the research</td>
</tr>
<tr>
<td>6</td>
<td>Samples need to be selected of a sufficient size in order to generalize research conclusions</td>
<td>Research findings do not have to be generalized</td>
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Despite these differences, Timmermans and Tavory (2012) in their abductive analytical presentation of theory construction argue that qualitative approach (induction) to theory formation can begin with the researcher having a broad base theory. However, new concepts can be developed in the course of the research through inductive strategy. In their own words “…researchers should enter the field with the deepest and broadest theoretical base possible and develop their theoretical repertoires throughout the research process…instead of theories emerging from data, new concepts are developed to account for puzzling empirical materials”. In tandem with the above position, Blackstone (2012) maintains that while inductive and deductive strategies to theory construction seem quite different, they can actually be rather complementary. He further added that in some cases, researchers will plan for their research to include multiple components, one inductive and the other deductive. In other cases, a researcher might begin a study with the plan to only conduct either inductive or deductive research, but then he/she discovers along the way the other approach is needed to help illuminate findings. This complementary strategy is otherwise known as process of triangulation in research and theory construction.

**Composite Strategy**

This strategy tries to overcome the disadvantages of research-then-theory and theory-then-research approaches. By this, composite strategy divides scientific inquiry into three stages namely: exploratory, descriptive and explanatory.

Reynolds (1971) and McDonald & Schneberger (2006) explain the above stages as follows:

1. Exploratory: In this sense, research is carefully designed in that the researcher looks for sufficient ideas and information to be able to describe what is being studied
2. Descriptive: Here, the researcher deeply describes identified patterns resulted from the exploration of the phenomenon being studied
3. Explanatory: This stage is anchored on the description of phenomenon under study. This stage is “actually a continuous cycle of theory construction, testing, and reformulation”.

Composite strategy creates flexibility of methodologies in such that various techniques are brought to addressing the shortcomings of the induction and deduction. For instance, the exploratory end of inductive strategy is seen as “utilizing a flexible research design” in composite approach, and as such more information and ideas are expected to come up in the course of data collection. These unanticipated events become part of what will constitute the theory. Also, composite strategy “assumes that a useful theory is hard to invent without some acquaintance with the phenomenon, which can be gained during exploratory and descriptive research” (Reynolds, 1971).

Clearly, the strategy adopted for constructing a theory is a function of the philosophical orientation and understanding of the constructor. But whether it is inductive or deductive, the following observations can be made:

- That the inductive strategy begins with empirical observations, seeking patterns in those observations and then theorizing about those patterns
- That the deductive strategy involves beginning with a theory, developing hypotheses from the theory, and then collecting and analyzing data to test those hypotheses
- That both inductive and deductive strategies can be employed together for a more complete understanding of the social reality
That though researchers don’t always set out to use both inductive and deductive strategies in their work, they sometimes find that new questions arise in the course of an investigation that can best be answered by employing both strategies.

Over all, both research-then-theory and theory-then-research strategies can only be assessed through a subjective interpretation of the assessor. This is because both strategies stem from different philosophical assumptions of arguably realism and nominalism. And with the composite approach, there seems not to have a sharp division as they can complement each other.

**FORMS OF THEORY**


**The Set-of-Laws:** These are statements strong enough to be considered as laws in the realm of scientific ideas. In this form of theory, all concepts must be operationalized with identifiable indexes or indicators. This would allow for measurement of all concepts in the theory. To this end, McDonald and Schneeberger (2006) state that “all set-of-laws theories have concepts that have operational definitions measurable in concrete situations”

Set-of –laws are usually identified when concepts consider abstract theoretical statements from the level of empirical support such statements have. Statements with sufficient or absolute empirical support are referred to laws, those with considerable empirical supports are known as propositions and those statements with no empirical support are called hypotheses.

Homans’ Exchange theory can relatively serve as an example in set-of-laws in the social sciences. This is because six interrelated propositions were drawn from it. They are:

1. The Success proposition which states that for all actions taken by persons, the more often a particular action of a person is rewarded, the more likely the person is to perform that action
2. The Stimulus Proposition: if in the past the occurrence of a particular stimulus, or set of stimuli, has been the occasion on which a person’s action has been rewarded, then the more similar the present stimuli are to the past ones, the more likely the person is to perform the action, or some similar action
3. The Value Proposition: The more valuable to a person is the result of his action, the more likely he is to perform the action
4. The Deprivation-Satiation Proposition: The more often in the recent past a person has received a particular reward, the less valuable any further unit of that reward becomes for him
5. The Aggression-Approval Proposition: When a person’s action does not receive the reward he expected, or receives punishment he did not expect, he will be angry; he becomes more likely to perform aggressive behavior, and the results of such behavior become more valuable to him
6. The Rationality Proposition: In choosing between alternative actions, a person will choose that one for which, as perceived by him at the time, the value, V, of the result, multiplied by the probability, p, of getting the result, is the greater (Homans, 1974)

The above propositions in the exchange theory of Homans exemplified set-of-laws as they make up the theory. This form of theory (set-of-laws) provides for typology, prediction, explanation and control (only if such statements are sufficient evidence). But unfortunately, it cannot provide for understanding because every concept used must be operationalized and does not give room for the incidence of serendipity (unanticipated events). Also, empirical support for statement does not serve as support for another statement.

**The Axiomatic Form**

An axiom according to Gibbs (1972) is an aspect of intrinsic statement in which the substantive terms are basically constructs. But as a form of theory, Reynolds (1971) defines axiomatic theory as an interrelated set of definitions and statements with features such as: a set of definitions (theoretical and operational), a set of existence statements (that is scope of reference of the theory) and a set of relational statements (both the axioms and propositions). Similarly, axiomatic theory consists of a basic set of statements (axioms), each independent of another, from which all other statements of the theory may be logically derived (like propositions).

Axiomatic forms of theory are largely found in the mathematical sciences (for example, in geometry). It is usually difficult to find axiomatic theory in the social sciences; however, attempts have been made by some social scientists such as Hopkins’ theory of Influence, as presented by Reynolds (1971) with nine considered axioms:

i. If rank, then centrality
ii. If centrality, then observability
iii. If centrality, then conformity
iv. If observability, then conformity
v. If conformity, then observability
vi. If observability, then influence
vii. If conformity, then influence
viii. If influence, then conformity
ix. If influence, then rank

From these axioms, i and ii can produce a new proposition as in the case below:

- If rank, then centrality
- If centrality, then observability
- Therefore: If rank, then observability.

The above example can be equated with a logical conclusion drawn from certain premises. For instance:

- All human beings are mortal
- David is a human being
- Therefore: David is mortal.

The advantages of axiomatic form include but not limited to the following: Statements can be derived from others; initial scientific statements can be small since other large set of statements can be generated from it; enhances efficiency of research since an empirical support for any one statement tends to provide support for the whole theory. However, the fundamental shortcoming of this theory is that it does not provide the sense of understanding. Also, it has the challenge of what yardstick to be used to determine certain statements as axioms.

**The Causal Process Form**

A casual process form of theory is the interrelationship of set of definitions and statements that describe those situations in which one or more causal processes are expected to occur, or identify the effect of one or more independent variables on one or more dependent variables (McDonald and Schneberger, 2006). Earlier, Reynolds (1971) had earlier asserted that causal process form of theory is related to axiomatic theory in the areas of its set of definition, set of existence statements. However, he identified their differences. According to him, the major difference between axiomatic and causal process is that “all statements are considered to be of equal importance, they are not classified into axioms and proposition, and the statements are presented in a different fashion, as a causal process” (Reynolds, 1971).

The cause and effect relationship particularly in the social sciences is becoming more problematic as human society becomes more complex and dynamic. This is because the idea that one thing causes another cannot give sufficient explanation of social reality. In line with this, Abdulrahman (2014) posits that “…the meaning of the concept of cause has changed from deterministic; that is, necessary and sufficient, to a non-deterministic notion in which the cause may be necessary but not sufficient”. Similarly, Little (2011:273) states that:

To explain an outcome is to demonstrate what conditions combined to bring it about—what caused the outcome in the circumstances, or caused it to be more likely to occur. The most fundamental aspect of an explanation is a hypothesis about what causes the circumstance we want to explain. So social explanation requires that we provide accounts of the social causes of social outcomes

In causal process, presentation of statements is meant to explaining how event occurs. Just like other two forms earlier discussed, this form provides for typology, explanation and prediction. Indeed, it can provide a sense of understanding if axioms are described in causal form, thereby giving readers greater and deeper insight or knowledge of the whole event or phenomenon rather than its parts.

More clearly and due to the strong relationship between axiomatic and causal process, “Axiomatic-Causal” Process was developed (Reynolds, 1972). The advantages of this form over the set-of-laws according to Reynolds include:

1. It provides a sense of understanding
2. It makes it easier to describe new paradigms
3. It may allow for more efficient research
4. It suggests a more concise and interrelated organization of scientific knowledge.

**APPLICATION OF SOCIOLOGICAL THEORIES**

Sincesociology was established in the nineteenth century as an academic field of study, its practitioners have never succeeded in reaching a truly stable consensus with regard to its object and mission. They have never really agreed even about core concepts. It should therefore come as no surprise that the correct understanding of theory has also been fiercely debated. The relationship between theory and empirical research was one subject of controversy, because certain social scientists assumed that we first need to carry out intensive empirical work to prepare the ground for a decent social scientific theory, while others asserted that empirical research without prior, comprehensive theoretical reflection would at best yield meaningless and at worst erroneous results. Social thinkers have also had very different ideas on the relationship between theories and world views.

Wacker (1998) argues that theories are abstract and do not have to be applied or tested to be a good theory. However, if this is the case, then theory would continue to remain totally abstract and non-applied. I strongly believe that crux of whether theory can be totally abstract and non-applied depends on the definition of theory. To this end, the essence of any social theory should be defined by its transition from abstract form to practical

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application. It is when theories are applied that social phenomena are either properly understood, explained or predicted.

Social theories provide “road maps” that help us understand and explain how society works. Simply speaking, how are we going to fix societal problems if we don’t know how society works? When we look at the complexity of society we look at millions and perhaps billions of individual people. And yet, despite these large numbers, most people behave in patterned ways. They act more similarly than they do differently. Why and how does this happen? Sociology addresses this question, with an array of theories, which many sociologists categorize into three general theoretical perspectives: Functionalism, Conflict Theory, and Social Interactionism. Most sociologists blend these three perspectives when trying to explain social life.

At any rate, one should be able to characterize the quite different theoretical approaches to social reality as put forward by scholars like Emile Durkheim, Max Weber, Herbert Mead, and Karl Marx among others. For example, Weber describes the state or political phenomena from a completely different point of view from Durkheim; the former thus had a quite different theoretical conception of the nature of the political from the latter, though both referred to the same empirical facts in their sociological accounts. Also, Mead’s conception of social action clearly differed markedly from that of Weber, though some of the terms they used were similar, and so on. All these scholars thus underpinned their sociological accounts with differing theories.

Indeed, theory is as necessary as it is unavoidable. Without it, it would be impossible to learn or to act in consistent fashion; without generalizations and abstractions, the world would exist for us only as a chaotic patchwork of discrete, disconnected experiences and sensory impressions. Of course, in everyday life we do not speak of ‘theories’; we use them with no awareness that we are doing so. In principle, working and thinking scientifically functions no differently except for the fact that here of course the formation and deployment of theories occurs quite deliberately. Specific hypotheses or theories are proposed to deal with specific problems; one then tries to combine several such specific theories to make a more general theory that links together the various generalizations in consistent fashion. But all in all, the construction of theories, of generalizing statements, is a significant component of both everyday life and science. It is our only means of approaching social reality. This was why Popper (1959:59) expressed that “theories are nets cast to catch what we call ‘the world’: to rationalize, to explain, and to master it. We endeavour to make the mesh ever finer and finer.”

II. CONCLUDING REMARKS

Every social theory is geared towards either to understand, explain or predict social phenomenon or event. The understanding, explanation or prediction is often based on the sufficiency or otherwise of existing information regarding what is to be understood, explained or predicted. Construction and application of social theories is therefore important to provide explanation to ever changing human society.

To have a functional sociological theory is a function of number of factors such as the philosophical foundation, the spacial-temporal domain and the concept operationalization. When concepts in a particular theory are properly operationalized, its application becomes less controversial. In all, to do sociology is to love research and research cannot be separated from theory. This is because theory and research are two sides of the coin.

REFERENCES