

The Relationship of Hypothesis to Theory in Human and Social Research

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Abstract:

Scientific research in the humanities and social sciences goes through precise and interconnected methodological stages and steps, some of which complement each other. The most prominent of these steps is defining hypotheses and relying on approaches, or systematically approaching a theory or a trend or even the concepts of that theory that the researcher adopts in a way that is appropriate to the subject of his research being studied.

If the hypothesis is a temporary answer to the research problem, then the theory is a valid hypothesis unless it is proven incorrect, modified, or completely refuted, since science is cumulative to ensure the process of knowledge.

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1. Introduction

Talking about scientific assumptions and theories in human and social research remains a relative matter, given the relativity of the human sciences, similar to the natural sciences, especially when it comes to generalizing results. However, the method as a stand-alone science granted these (human) sciences the character of experimentation in reality, leading to understanding, interpretation, and relative generalization of phenomena.

This is what the first founders called for, as Gaston Bachelard went on to say that the scientific fact must be constructed and examined; While Claude Bernard emphasized that curricula cannot be studied theoretically as general rules imposed on the world after he follows them, but rather are formed within the laboratory during direct contact with facts and practical experiences. This is because these practical processes and methods are only learned in laboratories. This naturally requires following sequential and interconnected scientific stages and steps that complement each other. Starting from the starting question that comes to the researcher's mind about a topic or phenomenon, all the way to producing scientific results.

One of the most prominent of these methodological steps that scientific research goes through is what is methodologically known as proposing hypotheses, provided that they are scientific hypotheses, accurate, clear, and objective, requiring verification in the field by relying on specific research methods and tools that are appropriate to the research topic or the phenomenon studied.

The most eloquent description of this is what Maurice Ingres expressed when he stated that if the hypothesis is an unreal acknowledgment of the existence of a relationship between two or more variables, then the theory is a real acknowledgment of the existence of a relationship between empirically verified variables, meaning if the hypothesis includes all the possibilities that are established. Verified in the field, the theory is everything that has been verified in the field.

If its validity is proven by analyzing its results, it becomes a theory relied upon in other studies, by adopting it or adopting one of its concepts for what is known as the approach in social and humanitarian research, noting that the term “approach” means the impossibility of the process of completely matching the theoretical concept with the concrete reality for its specificity. The research community, and its difference from other research communities to which this theory applies, both temporally and spatially. Therefore, what is intended is to approach theoretically the research topic under field examination.

Hence, we wonder: Are there any boundaries between hypothesis and theory in human and social research?

Through this research paper, we aim to demonstrate the overlap and interrelation between hypothesis and theory, and that the link between them lies in the empirical aspect, such that the hypothesis requires empirical verification, and the theory is what has been empirically verified, as we indicated previously.

We also seek to clarify the overlap between its stages that may benefit the researcher in accordance with epistemological and methodological logic.

2. What is meant by hypothesis and theory in human and social research?

2.1 Hypothesis in human and social research:

Interest in scientific hypotheses began around the second half of the nineteenth century thanks to the research of Claude Bernard, Ernst Mach, Francis Bacon and others, as they all confirmed the value of scientific hypotheses and their importance in deducing the laws through which to explain observed phenomena. They explained the conditions from which hypotheses arise, and the conditions that must be met in order to produce good hypotheses. Rather, they went further than that, and set rules for it in order to search for the truth and avoid pitfalls, as they put it.

Mach defined it as: a temporary explanation of certain facts, which remains isolated from the examination of the facts, so that when it is tested in the facts, it later becomes either a false hypothesis that must be changed to something else, or a law that explains the course of phenomena. (Badawi, 1977, p. 145).

Paley also defined it as: an assumption that is formulated in a way that makes it testable, and enables us to predict the existence of special relationships between two or more variables (Talaat, 1995, p. 29).

Therefore, the hypothesis is what is temporarily assumed until it is proven correct or not, even if it is relatively true when going to the field for inspection. These assumptions are naturally formulated around the research topic or the studied phenomenon, and this is done after the researcher has built up a rich knowledge base based on the literature and readings that have been reviewed, as well as exploratory interviews that were conducted within exploratory studies, to form a complete conceptual structure about the topic of his research, with the need for it to be. These assumptions are scientific, accurate and clear, simple and objective, and can be tested or measured on the ground.

By the way, we point out what Emile Durkheim pointed out in his book *The Rules of Method*, which states that objectivity is detachment from subjectivity, as if you were taking off your coat.

While Karl Popper also expressed it in that science is objective, meaning that its theories cannot be attributed to the content of individual feelings. Once the theory is established, it is subjected to testing. Either the theory remains or is rejected. (Popper, 1977, p. 37).

2.2 Theory in human and social research:

Some researchers believe that theory is nothing but an idea or a set of perceptions that were developed in advance to explain a phenomenon. Others believe that theory does not differ much from a scientific assumption, meaning that it is an issue that carries a principled explanation or a proposed solution to a specific topic, phenomenon, or problem. While others consider that the theory represents a model or approaches the processes of formulating patterns as a type of profiling that helps determine the interrelationships between characteristics or phenomena that we are trying to clarify or explain (Jones, 2010, p. 10).

The theory is also defined as: “a set of terms, definitions, and assumptions that are related to each other, and which propose an organized vision of the phenomenon, with the aim of presenting it and predicting its manifestations” (Angres, 2006, p. 54).

It is also: “the appropriate conceptual framework for interpreting phenomena and topics to become intelligible through this theoretical framework and guidance” (Hamed, 2007, p. 80).

There are those who also believe that “referring to a theory related to the problem of our research allows us to clarify and direct it, and the theory is used as a guide for preparing research due to the interpretations it provides about reality, and it guarantees a preliminary clarification and organization of the problem” (Angres, 2006, p. 144).

The theory is a hypothetical, deductive structure that expresses a cognitive intellectual system with a high degree of abstraction, and an organized methodological vision. It has specific ideas that are consistent with each other, and translates a fixed relationship between specific variables with the aim of identifying them and predicting the changes that occur in them.

We can also extrapolate generalizations from it that help us expand our knowledge regarding a phenomenon, and it plays the role of an intellectual guide in any scientific research. The

researcher MondheirEdhamen says about the theory, "It is science, not fantasies. It is organized concepts and definitions that work to predict the phenomenon and determine the causal relationship between the variables. It is a set of hypotheses that constitute the deductive system" (Edhamen, 2007, p. 37).

Hence, theory is what has been arrived at after verifying and verifying scientific assumptions empirically, and it is relied upon or its concepts are adopted when conducting scientific research on the topic or phenomenon to be researched (what is known as the theoretical approach), which helps us interpret the results obtained.

3.2 The approach in human and social research:

The approach in human and social research is among the basic methodological steps in the stages of scientific research, so it must be relied upon while doing so.

It means approaching the research topic theoretically, or adopting a theory or adopting one of its concepts at all stages of the research, as it helps the researcher in forming and building a theoretical perception about his research, and benefits him with its assumptions that have been verified in the field to become a theory.

This approach is defined as: "theoretical models, key concepts, and valuable research results, which together form a familiar world for researchers to think about, in a specific period of the development of a particular specialty" (Herman, 2010, p. 16).

Approach also refers to an intellectual direction or approach towards a topic or situation. This trend may be objective or subjective (Raymond and Bourico, 1986, p. 214).

There are also those who believe that: "What is called, according to the authors, an approach, a typical example, or a pattern of understanding, it relates to a specific way of constructing the subject of study theoretically and experimentally at the same time, by giving preference to a specific relationship or explanatory structure" (Bartillo, 1999, p. 81).).

In general, the goal of the theoretical approach in human and social research can be summarized in the following points: (Imran, 2004, p. 15)

- Giving meaning to the research results by making them possible for comprehension and not for isolation or separation from reality, and thus they include possibilities or abstract issues.
- It enriches the research by presenting important indications for future investigation. The relationship between research and theory is reciprocal, as research provides theory with new information stemming from reality.
- It stimulates future investigation in research and extrapolation, because the research does not only test the theory, but rather works to grow and develop it more than testing it, because it clearly and precisely defines the concepts of the theory and adds new influences to it.
- Leads or directs the social research process.
- It is the main source for formulating hypotheses, and one of the components of the frame of reference for interpreting the results of research and studies. Studies devoid of a theoretical

framework can be considered impressionistic press reports because they are not supported by scientific evidence.

- The theory provides the logical basis for social prediction, that is, it helps the researcher know the future of relationships and their effects.

3. What are the boundaries between hypothesis and theory in human and social research?

3.1 Variables:

It is methodologically known that there are inductive hypotheses and deductive hypotheses. The first is generalization based on observing specific variables that are related to each other in a number of situations. The second is derived from theory, and contributes to enriching scientific knowledge because it provides evidence that supports, expands, or contradicts a particular theory and suggests future studies (Jay, 2012, p. 74).

Or what is known as probative-correlational hypotheses that specify an expected relationship or difference between two variables. In other words, it guesses the relationship that the researcher is expected to verify by collecting, analyzing, and interpreting data; It is called evidentialism because it has a specific purpose, and it is considered one of the most important types of scientific hypotheses, and it is usually formulated in direct declarative statements, as opposed to null or negative hypotheses that state that there is no relationship between independent and dependent variables.

In other words, they are hypotheses that express an issue or issues that, if their validity can be rejected, require the existence of an alternative hypothesis or hypotheses that can be accepted, as a positive issue that determines the existence of a relationship between two or more variables. It is called negative because it is formulated in a negative way to reduce the possibility of bias (Talaat, 1995, p. 34).

The ability of this research also stems from forming meaning that can only be derived from reality, and here comes the researcher's creativity and ability to understand reality and summarize the results he arrives at to express them.

The researcher at this level creates models capable of recreating reality based on the connection that he sees as logical between the set of concepts that he has formed about reality itself. He sets out to form a theory based on a set of concepts or variables that he interrogated from his reality (Gauthier & et all, 2009, p. 115).

Let us reach that the variables of the hypothesis are formulated either through the theoretical conceptual construction of a theory, or after building a stock of knowledge as a result of readings of theoretical literature, or through what was observed in the field while conducting survey studies and exploratory interviews, or both, and a perception is built that enables the researcher to Formulating his hypotheses.

3.2 Deductive or predictive-explanatory approach:

The matter differs between the deductive approach, or the predictive interpretive approach, as the most complicated thing in it begins with adoption, that is, adopting the theoretical background closest to understanding reality, and here is the essence of the difference between it and inductive logic. If the latter uses reality to understand reality, the latter uses pre-existing thinking to understand it.

This means that deduction only comes to work on the results of induction. If inductive or qualitative research (as it is also called) contributes to theoretical formation, then deductive or quantitative research comes to confirm or refute the extent of the theory's ability to explain reality. In other words, deduction works on variables that were previously produced as outcomes of inductive qualitative research. As for rigor and firmness, they are required more in the deductive approach, as it is not permissible to exceed the limits of theory in analysis, to achieve understanding and interpretation of phenomena, or to predict them.

In other words, theory will become for the researcher in his research his religion in life, as it is the determinant for understanding reality. (Gauthier & et all, 2009, p. 109)

3.3 Proof and validity:

Scientific research in general - and in the field of social sciences in particular - seeks to arrive at theories that describe and explain the regularities of human behavior and various social phenomena, by measuring the real world according to precise methodological steps. The validity, credibility and efficiency of a theory cannot be proven unless it describes and predicts human behaviour. Therefore, it always remains the subject of testing and evaluation to ensure its validity, and is subject to modification or rejection whenever this is realistic (Gharbi, 2006, p. 27.28).

The purpose of proposing hypotheses in general is to prove their validity or incorrectness in the field, through the use of research tools appropriate to the topic, which translate those assumptions and break down their indicators in the form of questions, for example within a questionnaire or interview guide...etc., to collect information as much as possible, and then Analyze them, to come up with results that would prove the validity of the proposed hypotheses or reject them as negative null hypotheses, despite the relativity of this to the relativity of the human sciences in themselves, as we mentioned previously.

3.4 Experimentation:

There is no doubt that the theory is what has been verified in the field and proven correct, while the hypothesis remains provisional unless it is verified in the field or rejected.

This is done, of course, by collecting, analyzing and interpreting data, or applying the tools to be used. So that the results explain the validity of the hypothesis, and a good hypothesis must be testable in a reasonable period of time, because there are some hypotheses that cannot be tested (Jay, 2012, p. 74).

Theory is manifested in research through the hypotheses being tested because a hypothesis is a project to build a theory; The theory is also a constant test; The theory is valid as long as it is able to explain and anticipate reality, and therefore it is always a hypothesis awaiting testing, every theory is a hypothesis, while a hypothesis is not always a theory (Gharbi, 2006, p. 30).

In general, what we mean by experimentation in human and social research is conducting field studies and going into reality in order to verify the validity of what we have assumed about the subject of the research. Verification is carried out by relying on research tools imposed by the nature of the subject as a means of collecting information from the research community or the selected sample, then analyzing it and drawing the results reached.

4. Analysis of results:

Through the above, and based on what we were able to achieve, we suggest the following points to benefit those interested in the field, whether they are students or researchers, with the aim of clarifying the extent of interconnection and integration between hypothesis and theory in human and social research referred to in the previous elements:

- When formulating a hypothesis, there must be a rich theoretical balance, including knowledge of the study's literature, to build a conceptual opinion on the subject, so that we can crystallize it in a clear and precise scientific manner, far from general or intuitive propositions. From this we conclude that the hypothesis cannot be formulated without previously built theoretical accumulation.
- When formulating a hypothesis, it is necessary to conduct exploratory studies and exploratory interviews to investigate reality, so that it must be taken into account that the formulated hypotheses are capable of being measured or tested in the field.
- The variables and indicators of the hypothesis may also be derived from the concepts and assumptions of a theory, which are intended to be continued, confirmed, or completely refuted, since science is cumulative.
- It is true that the theory is made up of assumptions that have been verified in the field to become so, but they remain subject to modification or complete refutation in the event of the emergence of scientific results proving their incorrectness or through the existence of other hypotheses that deny their predecessors in a dynamic and cumulative manner.

Conclusion:

Through what was mentioned above, we reach that there is a close connection between the hypothesis and the theory, whether at the stage of formulating the hypothesis, as it is necessary to know the approaching theories or even their concepts in order for the researcher to be able to formulate them, whether the goal is to avoid repetition or continuity or to confirm the validity of that theory, This is on the one hand. On the other hand - what also reinforces the interconnection and overlap between theory and hypothesis in human and social research - is that the theory is what has been verified in the field, that is, it is a hypothesis whose validity has been proven in reality, thus becoming a reliable theory. This is what is called the theoretical approach in this research.

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