

The Research Problem in Sociological Inquiry: Mechanisms of Methodological Construction and Requirements of Scientific Formulation

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Abstract

This article examines the methodological construction of the research problem in sociological inquiry, treating it as the principal foundation from which scientific research proceeds in the study and analysis of social phenomena. It argues that the research problem represents the scientific concern raised by the subject of study, whereby a social phenomenon is transformed from a general observation into a scientific issue requiring investigation and interpretation according to a rigorous methodology. The article reviews a set of conditions and criteria that should be observed when formulating the research problem. These include objectivity, precision and clarity, the identification of the relationship between the study's variables, empirical testability, and formulation as scientific questions, as well as originality, scientific value, and feasibility within the researcher's capacities and available resources. At the applied level, the article presents a practical model for formulating a research problem in social research on the impact of incentives on achieving organizational effectiveness within the Algerian Water Company. It explains the stages of transition from a general presentation of the topic to the formulation of the main research question and subsidiary questions.

Keywords: research problem, sociological research, methodological construction, research questions, organizational effectiveness, incentives.

Introduction

Scientific research is an objective study conducted by researchers across various fields of knowledge to produce factual information about a specific problem affecting human societies. Since sociological research is characterized by scientific rigor, it comprises an integrated system of methodologically and epistemologically structured steps that guide academic research within clearly defined parameters. Its starting point is the precise identification and delimitation of the subject of study. Once this subject has been determined, the researcher faces an important stage without which the research cannot be completed: one that must be addressed in accordance with methodological principles. This stage articulates the concern raised by the subject, which the

social researcher must investigate to identify the rules governing the phenomenon under study. This stage is therefore referred to as the research problem.

To clarify the research problem and the manner in which it is constructed in sociological research, the following questions are raised:

- What is the concept of the research problem, and what is its importance in research?
- What are the sources through which the research problem is constructed?
- What are the conditions and criteria for its formulation?
- How can a social research problem be constructed? This will be addressed through a practical application.

First: The Concept of the Research Problem

Before addressing the research problem as a field practice within the subject of research, it is necessary to consider it as a concept that has been approached through different definitions and perspectives. It has been defined as “a question requiring clarification or an answer, or an ambiguous situation requiring interpretation; without the existence of a problem, there is no justification for the researcher to address anything.”¹

Professor Ghoulam Djamel Eddine also defines it as “the concern raised around the subject, expressed through questions to be verified empirically within a scientific and methodological framework. Through this framework, a given phenomenon is transferred from the general, common sphere to the specialized scientific sphere, which investigates its causes and consequences within a methodological framework that subjects it to scientific logic. It therefore expresses a problem or phenomenon observed by everyone, but one that arouses the interest of the specialist alone.” For example, unemployment in Algeria is a phenomenon that is observed and experienced negatively by all members of society; however, not everyone questions its causes or reality. If someone does raise such questions, the economist or sociologist emerges as the specialist. This emergence does not occur by chance, nor by posing naïve or self-evident questions like those asked by ordinary people. Rather, it occurs when the specialist takes up the phenomenon, subjects it to scientific logic, and examines it using a precise scientific methodology.²

Based on the two preceding definitions, the research problem may be defined as a methodological framework formulated by the researcher to address a given problem. It begins with a general presentation of the topic, followed by a more specific presentation in which the study's variables appear, and then a still more focused formulation, represented by the main research question.

Second: The Importance of the Research Problem

Scholars engaged in scientific research and specialists in methodology affirm that choosing and defining the research problem may be more difficult than finding solutions to it. This is because such a choice and definition determine the following:

¹ Hisham Hassan, *Manhajyyat al-baith al-ilmi*, 2nd ed. (Cairo, 2007), 92.

² Nadiya Said Ashur et al., *Manhajyyat al-baith al-ilmi fi al-ulum al-ijtimaiyyah* (Constantine: Muassasat Husayn Ras al-Jabal, 2017), 33.

- the type of study that the student can undertake;
- the organization of the research plan and the elements required for completing the research;
- the nature of the appropriate method for the study;
- the suitable tools for collecting field data and information;
- the type of data that should be obtained.

The importance of the research problem stems from its role as the principal driving force of the research and the determinant of its remaining components. Once the student has mastered the research problem and formulated it correctly, they will have identified what they wish to investigate and what must be obtained. This, in turn, leads to the formulation of hypotheses to be tested empirically and the objectives to be achieved. Consequently, the researcher can determine the direction of the research, the sources of both field and theoretical information, and the research field itself. The research problem thus moves the student away from generalities and uncertainty towards the specific issue under study. It enables concentration on what is important in the research and the exclusion of elements that do not contribute to the construction of the graduation dissertation.³

Third: Sources for Formulating the Research Problem

Various sources help formulate the research problem. These include the following:

- Consulting scientific sources and references: This is one of the sources that helps in formulating the research problem. Within this framework fall survey studies, previous research, and earlier studies related to the topic. These enable students to become familiar with the proper formulation of the research problem and help them acquire specialized scientific language. Thus, consulting the existing scientific body of knowledge on the topic paves the way for constructing a clear and precise research problem.⁴
- Scientific and field experience: The student's training at undergraduate and postgraduate levels provides field experience that facilitates the investigation of various issues and enables the student to address them through a flexible scientific approach that responds to the required methodology.⁵
- Specialization: Specialization provides the student with knowledge of scientific achievements in their field and makes them aware of the problems that have already been studied, as well as those that still require investigation and remain surrounded by ambiguity. The more familiar the student is with their field of specialization, the more capable they become of identifying the various factors affecting the problem and understanding most of its aspects. Consequently, they can conduct research efficiently and on a sound basis by drawing on expertise in their field of specialization.^{6,7}

³ Ashur et al., *Manhajiyyat al-bahth al-ilmi fi al-ulum al-ijtimaiyyah*, 34.

⁴ Ashur et al., *Manhajiyyat al-bahth al-ilmi fi al-ulum al-ijtimaiyyah*, 36.

⁵ Ashur et al., *Manhajiyyat al-bahth al-ilmi fi al-ulum al-ijtimaiyyah*, 36.

⁶ Ribhi Mustafa Aliyan and Uthman Muhammad Ghunaym, *Manahij wa-asalib al-bahth al-ilmi: al-nazariyyah wa-al-tatbiq*, 1st ed. (Amman: Dar al-Safa, 2006), 65.

⁷ Muhammad Shafiq, *al-Bahth al-ilmi: al-khutuwat al-manhajiyyah li-idad al-buhuth al-ijtimaiyyah*, 1st ed. (Alexandria: al-Matbaah al-Asriyyah, 1983), 24.

- The media: The media are considered one of the sources of knowledge that provide the student with information useful in shaping the research problem. They constitute an initial source that helps the student draw preliminary boundaries for the research problem. The media enable the student to identify a phenomenon and determine the extent of its spread within society. In some cases, they also provide figures and statistics that help clarify the ambiguity requiring investigation. Certain phenomena are brought into focus through the media, such as divorce, which concerns the sociology of the family; issues of education and schooling, which concern the sociology of education; and issues of unemployment and development projects, which concern organizational and work sociology. Through such sources, the student can identify the aspect that requires scientific study and thereby determine the question on which the topic will be built.⁸

Fourth: Conditions and Criteria for Formulating the Research Problem

- It must be selected scientifically and objectively: Not every phenomenon represents a problem that requires investigation and disclosure of its implications. There are self-evident matters that the researcher must avoid and should not adopt as a research problem. The researcher must adhere to objectivity and avoid subjectivity and preconceived judgments, as these obstruct the course of research and obscure its specialized scientific horizons. Subjectivity also prevents the student from uncovering the real aspects of the problem to be studied.⁹

- It must define the relationship between the variables of the study: The research problem involves linking the variables of the study and establishing a relationship between them. Since this is the central task and purpose of the research problem, the student must be attentive to the need to formulate a precisely defined problem that includes the relationship between the study's variables. The relationship between variables is one of cause and effect. Unless the relationship between the variables is identified within the research problem, the student will not be able to determine either the objectives or the hypotheses of the research. The existence of this relationship determines the research question and its objective.

- The problem must be formulated precisely and clearly, using sound language: This means that scientific language reflecting the terminology of the discipline must be used, so that the research problem does not remain general or naïve. This is based on the premise that every science has its own concepts and issues. For example, a student specializing in sociology should formulate the research problem in clear sociological language. Sound and specialized language increase the depth and strength of the argument and enhance its aesthetic appeal from a linguistic perspective.

- The problem must be empirically testable in its formulation: In other words, it must be researchable and grounded in reality and in the field, so that the student can examine its indicators empirically and ultimately arrive at findings derived from reality and fieldwork.

- It must be formulated as a main question or a set of questions: The research problem should not be left open-ended; rather, it should be delimited by a main question or a set of questions

⁸ Ashur et al., *Manhajiyat al-baḥth al-ilmi fī al-ulum al-ijtimaiyyah*, 38.

⁹ Muhammad Ubaydat et al., *Manhajiyat al-baḥth al-ilmi: al-qawaid wa-al-marāhil wa-al-tatbiqat*, 2nd ed. (Amman: Dar Wail, 1999).

formulated based on the general presentation of the theoretical and field-related ideas of the topic. Through this process, the student reaches a definition of the real concern and the ambiguity raised in the presentation, thereby identifying the aspects on which the research should focus. Since the sociological phenomenon is broad and its causes and consequences are interrelated, posing a question enables the student to define their direction and the aspect they will study.

- It must convey to the reader the degree of theoretical depth, scientific originality, and methodological competence involved in conceptualising all aspects of the topic and highlighting the specific features that distinguish it from others: One of the characteristics that distinguishes the research problem as an important stage of scientific research is that it serves as the criterion by which the originality, strength, and depth of the research are determined. This is what the reader should perceive within the research problem. In other words, whoever reads the research problem should sense its theoretical depth, originality, and scientific competence derived from the methodology adopted by the researcher.

- The problem must be original and of value: This means that it should not revolve around a trivial topic that is unworthy of study, nor should it be excessively repetitive.

- It must fall within the limits of the student's capabilities: This concerns competence, time, and cost. Some problems exceed the capacities of the researchers who undertake them, causing them to become lost within their complexity and ultimately fail to address them effectively.¹⁰

Fifth: A Practical Application for a Social Research Problem

After the student has read the intellectual sources related to the problem under investigation, they move to an important stage: formulating the research problem. Researchers have differed concerning the optimal method for constructing the research problem. I shall therefore confine myself to the method taught to us by Dr Habib El-Oued, which is as follows.

The construction of the research problem is divided into three sections.

The first section: Gradual entry into the subject of the study, moving from the general to the specific. This is achieved by presenting the already-known theoretical framework: "What do I know?" In other words, the researcher addresses the study's variables while outlining the basic concepts of the topic.

The second section: The inclusion of a theoretical approach, where possible, to guide the analysis of the topic, together with an indication of the institution under study.

The third section: The formulation of the main question and the subsidiary questions: "What do I wish to know?" This is done by identifying the dimensions used to interpret the topic.

Having addressed this theoretical division, we shall now apply these sections and elements to a model research problem in social research, as follows.

The First Section

The contemporary era is witnessing rapid development across economic, social, cultural, and political spheres. As a result of this development, organizations have grown, and their

¹⁰ Ashur et al., *Manhajjiyyat al-bahth al-ilmi fi al-ulum al-ijtimaiyyah*, 39-41.

importance within society has increased. Their survival has become dependent on their ability to compete, which has led many researchers and specialists in the field of organization and management to recognize that it is impossible to speak of an effective organization without paying attention to the human element as one of its essential components. Work incentives are considered a fundamental indicator of how highly the human element is valued within the organization. It is not sufficient for the individual merely to be capable of work; they must also have the desire to work. From this point begins the process of motivation, which seeks first to instill job satisfaction among employees and then to ensure increased dedication to work as a unified group.¹¹

From this perspective, organizational thought has devoted considerable attention to incentives, beginning with the scientific management approach of Frederick Taylor, which focused on motivating the worker through material incentives represented by an increase in the worker's daily wage for each unit produced, thereby linking the direct wage of each individual to the final product. This was followed by the Human Relations School of Elton Mayo, which added moral incentives, represented in social relations among workers, rest periods, and similar factors, to material incentives. This school emphasized that non-economic rewards play an important role in motivating workers and achieving greater psychological and social satisfaction.

Interest in studying the behavior of working individuals has continued in the modern era, relying on contemporary theories and concepts that differ from the classical theories previously mentioned, which focused primarily on productivity. The focus of modern theories and approaches has become equally directed towards both elements: productivity and the worker. Among these theories is Victor Vroom's expectancy theory, which holds that the individual's inclination to work arises when they believe that their behavior can enable them to obtain the desired benefits. Thus, the individual can be encouraged to work if they believe that their behavior will allow them to obtain benefits when the intended objectives are achieved. Similarly, Theory Z, developed by William Ouchi, emphasizes the human aspect of the worker. Ouchi observed that worker productivity cannot be resolved merely by spending money or investing in research and development. These measures alone are insufficient; rather, it is necessary to learn to manage individuals in ways that foster a sense of group spirit, thereby increasing organizational effectiveness.¹²

The Second Section

Absence of a Theoretical Approach to Guide the Research

Given that Algeria has several public economic institutions that contribute, in one way or another, to advancing the national economy, we deemed it appropriate to conduct the study on one of them. Our choice fell on the Algerian Water Company, El Oued Unit, as a case study. It is a national public institution of an industrial and commercial character, operating under the

¹¹ Belqasim Salatniyah et al., *al-Faaliyyah al-tanzimiyyah fi al-muassasah: madkhal susiyuluji*, 1st ed. (Cairo: Dar al-Fajr, 2013), 7.

¹² Muhammad Qasim al-Qaryuti, *Mabadi al-idarah: al-nazariyyat wa-al-amaliyyat wa-al-wazaiif*, 4th ed. (Jordan: Dar Wail, 2009), 276.

supervision of the minister responsible for water resources, with its registered office in the city of El Oued.

The Third Section

Within this general context, we raise the main question of the study:

- Do incentives contribute to achieving organizational effectiveness within the institution?

The following subsidiary questions derive from this main question:

- Do material incentives lead to an increase in organizational effectiveness?

- Do moral incentives lead to an increase in organizational effectiveness?

- Is there a relationship between job satisfaction and increased organizational effectiveness?

Conclusion

Having addressed the most important components involved in constructing the research problem in sociological research, it may be affirmed that the research problem is not merely a formal step or a passing methodological procedure within the course of scientific inquiry. Rather, it represents the compass that gives the study its meaning and scientific direction. It is the starting point that determines the researcher's path, delineates the boundaries of the subject, and guides their theoretical and methodological choices. It also constitutes the framework within which the various stages of research are organized, from data collection and analysis to the interpretation of findings and the drawing of conclusions. The precise, clear, and coherent formulation of the research problem, in accordance with the nature of the subject under study, necessarily implies the sound scientific construction of the research. It provides the researcher with a methodological vision that helps them avoid dispersion and ambiguity and enables them to address the social phenomenon scientifically and objectively. Moreover, the quality of the research problem is directly reflected in the quality of the subsidiary questions, hypotheses, and methodological tools employed, thereby enhancing the scientific credibility of the findings.

Conversely, a weak research problem, or one constructed on unsound foundations, leads to deficiencies across the various stages of the research. It causes the researcher to encounter difficulties in defining the study's objectives, selecting an appropriate method, and interpreting the results. This may, in turn, negatively affect the scientific value of the research as a whole. For this reason, careful attention to the formulation of the research problem is a genuine scientific investment that saves considerable effort and time in subsequent stages of research.

Thus, the sociological researcher is required to devote significant attention to this foundational stage by acquiring a thorough theoretical understanding of the topic, consulting the relevant literature and prior studies, and developing the ability to translate social phenomena and real-world issues into scientific questions amenable to study and analysis. The more the research problem is grounded in solid epistemological and methodological foundations, the more capable the study is of contributing to the production of precise scientific knowledge about social reality. It can therefore be said that the student or researcher who succeeds in formulating their research problem in accordance with sound scientific and methodological principles has already made substantial progress towards producing successful, integrated research. A well-formulated research problem represents the cornerstone upon which the remaining elements of the research

are built. It is also the first indicator of the maturity of the research idea and of the researcher's awareness of their topic and its various dimensions. Thus, the research problem remains the key to the research, its principal driving force, and a necessary condition for achieving reliable scientific results that can be used to understand and interpret social phenomena.

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