

How to organize and employ the sociological approach within artificial intelligence and scientific security applications

طريقة تنظيم وتوظيف المقاربة السوسولوجية ضمن تطبيقات الذكاء الاصطناعي والأمن العلمي

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Abstract:

الملخص:

This study aims to demonstrate that the use of artificial intelligence applications remains a double-edged sword. This was achieved through the use of an analytical approach.

The study concluded that while artificial intelligence can play a valuable role in facilitating organization, streamlining analysis, and saving time, it should never be fully depended upon. Human intelligence retains its indispensable place—one that no form of artificial intelligence can replicate or surpass.

Keywords: Artificial Intelligence, Theoretical Approach, Sociological Research, Phenomenon, Organization.

تهدف هذه الدراسة إلى توضيح أن استخدام تطبيقات الذكاء الاصطناعي يبقى سيف ذو حدين. وكان ذلك عن طريق استخدام المنهج التحليلي.

توصلت الدراسة إلى أن الذكاء الاصطناعي قد يؤدي دوراً قيماً في تسهيل التنظيم، وتبسيط التحليل، وتوفير الوقت، إلا أنه لا ينبغي الاعتماد عليه كلياً. فالذكاء البشري يحتفظ بمكانته التي لا غنى عنها، والتي لا يمكن لأي شكل من أشكال الذكاء الاصطناعي محاكاتها أو تجاوزها.

الكلمات المفتاحية: تطبيقات الذكاء الاصطناعي، المقاربة النظرية، البحث السوسولوجي، الظاهرة، التنظيم والتوظيف..

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1. Introduction

Sociological research may appear to be a straightforward process that researchers can easily undertake. However, once confronted with the scientific reality and the necessity of adhering to methodological steps, many students and researchers experience anxiety during the execution of their academic work. This is especially evident when it comes to employing sociological theory or identifying the appropriate theoretical approach for their subject of study. In our experience with sociological research at Algerian universities, many students and some researchers face difficulties, often displaying scattered efforts and struggling to establish a coherent research structure that is methodologically, theoretically, and empirically sound. Perhaps the most prominent of these challenges is selecting, presenting, and employing the sociological approach in social research. We consider this one of the main obstacles encountered by those working in the field of sociology, given that it deals with the study of social phenomena.

Therefore, a researcher in the field of sociology must be characterized by credibility, which begins by framing the subject of their study within a sociological context in order to facilitate understanding of the phenomenon under investigation. This entails following the steps of sociological research and avoiding the separation of the theoretical dimension of the study from its practical fieldwork—even when the researcher relies on artificial intelligence applications. Such reliance will inevitably have limitations, as the research process remains confined to three essential phases:

- The observation phase
- The conceptualization phase
- The methodological phase

Finally, the researcher returns once again to the observation phase when analyzing and interpreting the results.

Accordingly, we will attempt to outline the steps that researchers must follow when employing the theoretical approach. These steps remain constant even when artificial intelligence tools are used. When designing a study, the researcher must formulate a coherent plan and a comprehensive project that clearly outlines the objectives of the research, as well as the methodologies and tools that may be used to achieve those objectives. A well-structured design of all research steps is essential and should be sequential—meaning there should be no separation between its various components, as they are inherently interrelated. Such integration assists the

researcher in arriving at precise scientific results. It is crucial to integrate all these steps while emphasizing the theoretical approach adopted in the research. In other words, the theoretical approach should be evident from the title of the work to the conclusions drawn.

From this standpoint, the purpose of this article is to highlight the key methodological steps and clarify how to employ the theoretical approach in sociological research. The aim is to eliminate the ambiguity and confusion that students and researchers may encounter when conducting their studies. Many students today lack proficiency in applying the theoretical approach in their sociological research, which burdens them and becomes one of the major obstacles in their academic work, often leading to exhaustion. Despite the availability of advanced search engines and various artificial intelligence applications, many still fall into error and struggle to escape it—unless they utilize their own intellect and correct their scientific and methodological knowledge.

Therefore, discussing the sociological approach necessarily raises the following question:

How, and with what conceptual framework, can a sociology researcher understand the reality of their research subject and monitor its variables?.

If we were to pose the same question using artificial intelligence-based search tools, it would be as follows:

How can artificial intelligence be used as a necessary tool in sociological scientific research to facilitate the identification of an appropriate theoretical approach while preserving the researcher's scientific security?.

2 - Key Concepts and Terminology

2-1 - Scientific Research

Scientific research is the systematic investigation conducted by following precise and defined scientific methods and approaches in order to arrive at meaningful scientific facts and predictive scientific theories. It is an attempt to discover, explore, develop, examine, and verify knowledge through rigorous investigation and deep critique, and then to present it comprehensively with intelligence and insight in a way that aligns with global progress and makes a comprehensive, humanistic contribution(Malhas, 1960, p. 24).

2-2-Sociological Research

The definition of sociological research does not differ from that of scientific research, except in terms of its subject. It focuses specifically on social life and its phenomena, which are the subjects of its studies. It follows the same path as other scientific research. Sociological research begins with a social phenomenon that is either ambiguous or requires explanation, and it necessitates a methodological process and a well-structured design. Sociologists define research as: “A set of dynamic, interrelated, and overlapping processes conducted by one or more scholars in a scientific discipline with the aim of systematically collecting information that illuminates an observable phenomenon, in order to explain and understand it. It is an attempt to discover knowledge”(Imad, 2002, p. 15).

2-3-The Concept of Theory in Sociology

A scientific theory is a structure of systematic thinking conceived by human imagination within a broad scope, encompassing a set of laws. The literature of sociology includes numerous definitions of social theory. "Thomas Ward" reviewed twenty-seven definitions and concluded that a theory is “a coherent system of deductive and inductive logic consisting of concepts, definitions, and assumptions that express relationships between two or more aspects of a phenomenon, from which hypotheses can be derived and tested for validity” (Othman, 2008, p. 16).

Theory is thus considered a structured cognitive and logical system that provides a conception of the reality it addresses. This system consists of concepts and theoretical assumptions with an empirical dimension that allows for understanding and explaining reality.

2-4-The Concept of Approach (Theoretical Approach)

An approach is defined as a conjectural method of inquiry that aims to comprehend a given subject from a certain perspective and verify the resulting knowledge without necessarily reaching a level of absolute certainty. It is neither all-encompassing nor exclusive, methodologically or theoretically.

2-4-1-Methodologically

The ways of producing and verifying knowledge are multiple and not unified.

2-4-2-Theoretically

The conceptualization and understanding of the subject are partial, not complete (Abbassi, 2010–2011, p. 39).

2-5-Theoretical Approach

A theoretical approach is any scientific research that is grounded in a theoretical reference or background. Based on this theory, the researcher can advance in their study. In the Dictionary of Social Science Terms, the theoretical approach is considered synonymous with intellectual orientation or perspective (approach), and it carries various connotations, most of which point to the following:

It is an intellectual orientation toward a specific subject or situation, which can be either objective or subjective (Badawi, 1982, p. 24).

It involves conceptualizing a subject within a theoretical framework and providing the researcher with the conceptual tools necessary to shape the research path and interpret results in light of the adopted theoretical assumptions. Each approach implies a research orientation. From this standpoint, there are three approaches: structuralist, functionalist, and symbolic interactionist, corresponding respectively to positivist (empirical) sociology, interpretive sociology, and critical sociology.

2-6-Sociological Approach

2-6-1-Linguistically

The empirical meaning of the term “approach” (approche) is derived from proximity and approximation, involving accuracy and the pursuit of truth. It is said, for example: “So-and-so approached so-and-so” when he drew near, or “approached the matter” when he was truthful and avoided exaggeration. Hence, the term qirâb (sheath) means to enclose a sword (Academy of the Arabic Language in Cairo, 1972, p. 723).

2-6-2-Terminologically

The sociological approach consists of theoretical models, key concepts, and valuable research findings that collectively form a familiar intellectual world for researchers during a given period in the development of a specific discipline (Hamman, 2010, p. 16).

In reality, one must consider what some authors refer to as an "approach" or a "paradigm" or a "mode of understanding"—that is, a specific way of theoretically and empirically constructing a research topic

by prioritizing a particular relationship or explanatory structure. In this sense, the sociological approach procedurally refers to the set of concepts validated through exploratory research and adopted in the study (Leach, 2010, p. 42).

Accordingly, the sociological approach has a distinct identity—rooted in its scientific lineage and theoretical field—which places upon the researcher the responsibility of verifying the epistemological foundations of the study. That is, linking concepts and approaches to their relevant theoretical framework. This process requires the researcher to possess theoretical literacy, that is, knowledge of the foundations and branches of sociological theory, whether within general sociology or one of its subfields.

2-7-Artificial Intelligence

Artificial intelligence refers to the technological capacity to design and develop systems and programs capable of performing tasks that resemble human intelligence. AI relies on technologies such as machine learning, data analysis, and artificial neural networks to enable artificial systems to process information and make intelligent decisions (Leach, 2010, p. 43)

Nonetheless, AI remains a tool for structuring research rather than a definitive method for producing valid scientific results. For this reason, we will address the steps of sociological research, which remain essential in scientific inquiry despite differences in their articulation.

3. Steps of Sociological Research

There is considerable variation in defining the steps of sociological research, as these stages may differ from one researcher to another. For example, Raymond Kéfi categorizes them into seven stages grouped into three main phases: rupture, construction, and verification.

Rupture Phase: This includes three essential steps—the initiating question, literature review and inquiry, and formulation of the research problem.

Construction Phase: At this stage, the researcher constructs the analytical model of the study, including the development of hypotheses and key concepts.

Verification Phase: This also comprises three steps—observation, data analysis, and deriving results (Daliou & al., 1999, p. 15).

Other scholars, such as Ma'n Khalil Omar, identify six fundamental stages in sociological research:

- Choosing the research topic.
- Writing the research proposal (research design and implementation method).
- Collecting theoretical and empirical (field) data.
- Organizing the gathered data and applying the selected methodology.
- Interpreting and analysing the data.
- Drawing conclusions and offering recommendations (Daliou & al., 1999, p. 16).

Meanwhile, Fadhel Daliou himself proposes a tripartite model consisting of three main stages, each comprising specific procedural steps:

The theoretical framework, the applied framework, and the results (Daliou et al., 1999, p. 18).

4. The Importance of Theory in Sociological Research

The debate remains ongoing among sociologists regarding the relationship between theory and sociological research. Some emphasize the importance of theory, arguing that it defines the contours of the research, given that it contains either an explanatory or conceptual axis that allows the researcher to formulate their study within a scientific framework—from the problem statement to the results. This is despite the differing perspective of others, who disregard the role of theory and hypotheses in social research on the grounds that these elements may compromise objectivity by biasing the researcher with preconceived judgments.

However, we maintain that every sociological research endeavour is based on a theoretical reference or background. It is through this theory that the researcher can understand the subject of study and advance in the completion of the research, thereby ensuring a sound and well-structured foundation. Herein lies the clarity of the relationship between theory and sociological research.

The research approach is considered a method, a technique, or a type of research design and outcome. It is not merely a tool for analysing data; rather, it includes all aspects of the research, from formulating the research question to answering it (Sarantakos, 2017, p. 239).

The methodological approach is also considered a conceptual or hypothetical mental framework that the researcher uses and relies on in their study to approach the subject of interest(Nessissa, 2015, p. 17).

Thus, the approach represents the method by which the researcher addresses the study topic, starting from a theoretical basis—in the sense that the subject is studied through a sociological theory the researcher deems appropriate in order to understand it.

Each researcher seeks to adopt a theory they feel aligns with the subject of their study, thereby enabling them to structure their research with precision within a scientific framework(Nessissa, 2015, p. 17).

The goal of the sociological approach in research is to approach reality and attempt to understand and analyse it objectively(Okasha, 2012, p. 80).

Theory is distinguished by several characteristics that render it of great importance to research, even if it is temporary. It contains assumptions about the variables that must be taken into account and offers guiding principles. This aligns with what Durkheim argued: that the cause of a social fact should be sought among the social facts that precede it(Jallabi, undated, p. 52).

The theoretical background aids the researcher in understanding the problem or phenomenon, as well as the relationship between the influencing factors and variables. The theoretical axis leads to the formulation of the research problem, the development of hypotheses, and the construction of concepts. It also provides proposed rules for interpreting data and identifying solutions based on indicators derived from the field, among other implications that require theoretical support.

Maurice Angers states in his book *Methodology of Research in the Human Sciences*:

"We must refer to a theory related to the research problem, one that allows us to clarify, direct, and renew it... Theory is used as a guide in preparing research due to the interpretations it offers of reality... and it provides an initial clarification and organization of the problem"(Angers, 2006, p. 144).

Accordingly, theory is employed in research to construct the problem statement, propose hypotheses to be tested empirically, and guide the study with conceptual models. It assists the researcher in selecting variables and the data to be collected, and contributes to clarifying the results. Thus, the

theory used in the research serves to organize empirical findings, explain the phenomenon under study, and clarify the relationships among variables (Al-Dhamin, 2006, p. 144).

In light of all this, the relationship between sociological theory and sociological research lies in the theory's role as a conceptualization of the reality under study. It contributes to generating hypotheses and provides the researcher with the logical foundations through which hypotheses can be linked. Moreover, it plays a role in interpreting and understanding the studied phenomenon.

Therefore, it is imperative for the researcher to master the above-mentioned knowledge in order to be able to apply artificial intelligence tools, which, in our present era, have become a double-edged sword. If used wisely in scientific research, AI will benefit the researcher; if misused, it may lead to scientific disasters. For this reason, we have sought to clarify its importance in scientific research in general, and theoretical approaches in particular.

5-The Importance, Features, and Characteristics of Artificial Intelligence and the Theoretical Approach

Before addressing the method of defining the theoretical approach, we will first explore the importance, features, and characteristics of artificial intelligence:

5-1 -The Importance of Artificial Intelligence in Research

Artificial intelligence is considered a technological revolution capable of achieving super intelligence.

Its ability for self-learning and adaptation allows it to continuously improve and evolve.

In addition to contributing to the enhancement of the quality of life through constant updates across various fields, artificial intelligence also has a negative aspect: it puts scientific research at risk of intellectual theft and poses a threat to humanity and the sustainability of life. However, it still retains a number of positive aspects, which can be identified through its key features and characteristics.

5-2-Characteristics of Artificial Intelligence

- **Learning Ability:** The capability to acquire knowledge and modify behaviour based on past experiences.

- Linguistic Thinking: The ability to reason, infer, and express using natural language.
- Deductive Reasoning: The capacity to derive new information based on available data.
- Environmental Interaction: The ability to effectively engage and interact with the surrounding environment.
- Planning and Execution: The capability to set plans and implement them to achieve specific goals.
- Recognition of Images and Sounds: The ability to recognize patterns, images, and sounds(Winston, 1984, p. 43).

5-3-Features of Artificial Intelligence

- Processing Speed: The ability to process data and perform computations rapidly and efficiently.
- Accuracy and Precision: The capability to execute tasks with high precision and produce accurate results.
- Continuous Learning: The ability to learn from data and past experiences, continuously improving performance over time.
- Handling Large-Scale Data: The ability to process, analyse, and extract information from vast datasets.
- Diagnosis and Problem-Solving: The ability to analyse complex problems and propose effective solutions.
- Human Interaction Capability: The ability to interact and communicate with humans in a natural, effective manner.

These features highlight the benefits of artificial intelligence across various domains, such as large-scale data analysis, the development of innovative interactive applications, and solving complex problems(Poole & Mackworth, 2023, p. 32).

5-4-Methods of Artificial Intelligence

- Search and Exploration: Using algorithms and computational techniques to search for and explore solutions to problems, as well as discover new knowledge.
- Machine Learning: Developing models and systems that leverage data and past experiences to improve performance over time.

- Automated Reasoning: Using logical rules and algorithms to infer information and make rational decisions.
- Natural Language Processing: Developing systems capable of understanding and producing natural language in a manner similar to human communication.
- Computer Vision: Developing technologies that enable computers to understand and analyse images and videos.
- Deep Learning: Using artificial neural networks to learn and interpret complex data representations.

These methods enable artificial intelligence to achieve a wide range of practical and effective applications in fields such as medical diagnosis, machine translation, and big data analysis (Russell & Norvig, 2016, p. 45).

It's important to note that artificial intelligence is merely a tool for saving time and gaining cognitive insights. Human intelligence remains the core of producing sound research through the appropriate application of correct theoretical approaches. For this reason, we have decided to explore how to effectively employ the theoretical approach in scientific research, studies, and all forms of scientific output.

5-5-Employing the Theoretical Approach in Sociological Research

We will briefly outline how to employ the theoretical approach in sociological research in general, noting that while artificial intelligence can be applied broadly in research, the human mind remains essential when it comes to applying methodological steps in detail.

Sociological research is not simply a vast collection of information obtained from observation or from respondents' answers to survey questions. It must be based on a solid theoretical foundation that aligns with the research topic and objectives. This theoretical framework serves to clarify the dimensions of the problem and guide the methodological direction of the study. In the process, students are introduced to sociological, psychological, and economic theories. However, when conducting field research, they often make a methodological error by dividing the research into two distinct sections—one theoretical and one empirical—without integrating the two. As a result, field research becomes merely a data-collection exercise using fieldwork techniques, while theories are treated as abstract, irrelevant content studied only because they are part of the curriculum (Assar, 1982, p. 96).

Alternatively, students may present theories as a separate section, whereas theory should accompany the research process from the initial stages, beginning with the formulation of the research title and continuing through to the conclusions.

Most sources related to scientific research fail to address how theoretical frameworks should be applied in scientific studies, and when they do, it is only briefly touched upon. Many books, for example, focus directly on the research stages—such as the problem statement, characteristics, and objectives—along with how to formulate research questions and hypotheses, without explaining how theories should be integrated into the development of the problem and hypotheses. However, this is crucial in the early stages, including refining the topic, constructing the problem, linking variables, and even selecting appropriate indicators for fieldwork, as these are processed through the researcher's cognitive framework.

The theoretical background thus plays a pivotal role in guiding the correct course of scientific research. Neglecting its application makes the researcher's task much more challenging, as many researchers mistakenly regard the problem statement and research outline as the core components of the study. They often base these solely on the title or preconceived ideas, which is a significant error.

With this in mind, we will now clarify how to apply the theoretical approach in sociological research.

Once the researcher selects a phenomenon to study, they must familiarize themselves with the various theories related to the topic. Then, they must choose the most appropriate theory by examining its concepts, with one of these concepts typically corresponding to a variable in the study (related to the title), as this step is essential for defining the research topic.

Let's consider a study titled "Motivation and Its Role in Improving Performance." Once the research title is established, the next step is to explore the various theories related to motivation. Artificial intelligence-powered search engines can be used for this purpose. For example, we may find that Herzberg's Motivation Theory addresses intrinsic and extrinsic motivation as sociological constructs, representing various types. After selecting the theory to be adopted in the research, we integrate it throughout the sociological research process, applying it at every stage. Additionally,

related theories on motivation and needs, such as Maslow's and McClelland's theories, will be incorporated.

5-5-1- The Problem Statement

After selecting the theoretical approach and defining the research or study title, the researcher formulates the problem statement based on the assumptions and principles of the chosen theory. The goal is to frame the phenomenon within the context of the theory by integrating the core concepts of the problem into the theoretical framework and the perspectives of its key scholars.

To clarify this process, we will provide a concise example related to the topic "Motivation and Its Role in Enhancing Performance," demonstrating how the theoretical approach is applied.

Example of Constructing a Problem Statement:

An organization is a setting in which individuals engage in various actions and interact through social, economic, and cultural relationships. The significance of the organizational context for the individual lies in its role as a platform where personal values and standards are expressed, societal roles are fulfilled, and social standing is shaped.

(Since the topic concerns motivation within an organization, we start with the broader context—the organization itself—and then narrow the focus to the specific topic of motivation within the organization and its impact on performance.)

Once the problem is constructed based on concepts from the theoretical framework, the research question is then posed.

5-5-2-Hypotheses

After formulating the problem statement and posing the research questions, the researcher proceeds to develop the hypotheses for the study. These hypotheses are essentially the assumptions and principles of the chosen theory, adapted into testable propositions that can be empirically validated. The hypotheses are based on the variables derived from the theoretical concepts and are closely linked to the sub-questions, which are, in turn, drawn from the concepts of the theoretical approach.

For example, the hypotheses might be as follows:

- The higher the wages and bonuses, the higher the level of material motivation, which increases motivation and raises the ambitions of

employees, thus improving performance within the organization (the organization's name should be included, as it is the field of study).

- The more positive the relationships, fairness, and suitable working conditions, the higher the level of intrinsic motivation, which increases motivation and raises employees' ambitions, leading to improved performance within the organization (again, the organization's name should be included, as it constitutes the field of study).

It is clear that the variables within the hypotheses are derived from the assumptions and concepts of the theory. The independent variables may change to align with the theoretical approach adopted in the research, depending on the research topic, the researcher's perspective, and how the topic is framed.

5-5-3-Concepts

The researcher then proceeds to define the concepts relevant to the research or study—concepts drawn from the theoretical framework as well as those that form the foundation of the problem statement. The researcher attempts to define each concept according to the ideas of the theorists from the adopted framework. Defining concepts is a crucial step in sociological research, as it is key to understanding the researcher's vision and clarifying the features, dimensions, and indicators of the phenomenon under study.

Concepts are defined as: “mental constructs for a variety of phenomena that one intends to observe in reality”(Badawi, 1982, p. 28). The process of defining concepts is based on constructing a theoretical foundation, which serves as the basis upon which the research is built.

Theory, in this context, is considered a hypothetical, conceptual, and knowledge system used in current or ongoing research. It is characterized by abstraction, coherence, and a high degree of consistency. However, the scientific validation—both theoretically and empirically—of the propositions of this conceptual system would not be feasible without the inherent readiness of this hypothetical knowledge system. This readiness allows for the approach and interpretation of social reality. Therefore, the sociological approach involves transitioning concepts from their abstract theoretical state to a tangible, empirical one, aiming to construct social reality and transform it into both a scientific and social reality.

It is important to note that the researcher may not, in all cases, utilize the entire conceptual apparatus of the theory. This is not a requirement. The

approach is called an "approach" (Theoretical Approach) because achieving complete correspondence between the theoretical concept and field reality is impossible. Additionally, the application often takes place in a different temporal context from the theory's original one, and it also deals with various societal specificities.

Sociological theories cannot be treated as a neglected archive to be overlooked, nor can their concepts be fully accepted in research without scrutiny. This leads many researchers to engage in practices such as "bundling," or dense aggregation of theories, without a clear immediate research need. In both cases—whether neglecting or blindly accepting these theories—error is introduced, as both perspectives lie outside the methodological logic of sociological research.

5-5-4-The Applied Dimension

Once the theoretical and methodological framework of the research or study is established, the researcher moves on to the applied dimension. At this stage, the researcher analyses the results in light of the adopted theoretical framework, supporting the analysis with references to the assumptions of the theory and statements by its key theorists. This phase represents the final stage of the research: interpretation and conclusion. It is important to emphasize that artificial intelligence cannot be relied upon in this stage for analysis or theoretical citation.

For the applied dimension to be methodologically sound, the researcher must adhere to specific structural levels in selecting, presenting, and applying the sociological approach:

5-5-4-1. Structural Levels in Selecting the Sociological Approach

There are two key structural levels to consider when choosing a sociological approach:

- The level of general sociological theoretical heritage
- The level of specialized sociological theoretical heritage

This means the researcher selects their approach either from macro sociology or micro sociology. The latter is often preferable due to its greater precision, specificity, and tighter alignment with the research subject. Hence, maintaining conceptual proximity is essential, as it draws upon the specialized theoretical field related to the subject.

5-5-4-2. Methodological Framework for Presenting and Applying the Sociological Approach

5-5-4-2-1. On the Level of Presentation

During the analysis phase, it is important to clarify the theoretical framework to which the adopted approach belongs. In the interpretation phase, the researcher should present the major concepts of the employed conceptual system. This includes:

- The general problematic of the theoretical current;
- The general hypothesis underpinning that current;
- And finally, the specific concepts of the sociological approach being applied to the study.

5-5-4-2-2. On the Level of Application

In field research, one central question arises:

What are the indicators that confirm this research has effectively employed a sociological approach?

The answer lies in recognizing that all elements of the research are interrelated. The first strong indicator appears at the theoretical construction level:

- The theoretical approach must be clearly linked to the concepts upon which the research problem is founded;
- It should also be linked to the concepts that were operationalized as variables in the hypotheses;
- These hypotheses then inform the structure of the chapters and sections within the theoretical part of the study.

The second major indicator emerges in the empirical component, particularly in the sociological interpretation of quantitative and qualitative data. In this stage, the researcher draws upon their sociological imagination, informed by the concepts of the chosen approach, and reinforces their analysis with field notes and observations. This analytical process is what ensures the objectivity of the results.

In conclusion, the sociological researcher must engage deeply with the theories relevant to the subject of their research, aiming to embed the study within a theoretical framework guided by the following principles:

- The problem statement is constructed based on well-defined concepts and indicators.
- The hypotheses are formulated from conceptual variables.
- The research instruments (questionnaire, interview, etc.) are designed around these indicators. In some disciplines, a preliminary tool is required to assess validity and reliability, often through the application of the Fürbach coefficient.
- The nature of the research topic itself determines the choice of methodology and approach—whether qualitative or quantitative.
- Ultimately, the theoretical approach serves as the foundation of the research, upon which all subsequent steps are built.

- Conclusion

This article began with the premise that sociological research is not a mere accumulation of theories, concepts, and approaches. Rather, it is the deliberate application of a method, guided by the selection and use of an appropriate theoretical approach. Through our discussion—drawing on theoretical models and practical examples—we aimed to alleviate the confusion and hesitation often experienced by researchers in the field of sociology.

We observed that whenever the term sociological approach is brought up, numerous questions tend to arise: How does one take the first step? How can the research be structured to remain methodologically coherent? In addressing these questions, we turned to AI-powered search engines as helpful tools for initiating a well-framed research structure. However, these tools must be complemented by the researcher's own intellectual insight and scientific judgment in order to avoid the pitfalls of academic misconduct—most notably, plagiarism.

In light of this, we propose a set of key recommendations that every sociological researcher should follow—steps that must be adhered to in sequence and in accordance with methodological principles, without skipping any stage or misusing AI tools in ways that might compromise academic integrity:

- First, it is essential to understand that sociological research unfolds according to a dialectical logic—one that governs its stages of formulation, construction, and realization.
- Second, the success or failure of any sociological study can often be traced to whether or not this dialectical logic has been upheld. In this context, the

sociological approach stands out as the clearest illustration of this logic, as it plays a pivotal role in shaping several critical stages, both before and after its application.

▪ Third, managing variables effectively always begins with conceptual clarity. By clearly defining key concepts, we are able to construct a coherent problem statement. From this foundation, the title of the research naturally emerges—one that encapsulates the focus of the study.

Building on these concepts, we can then formulate the central research question, define the variables that shape our hypotheses, and use those hypotheses to construct the theoretical framework of the study. Finally, the application of the sociological approach in the field lends the research its empirical and analytical identity.

In short, every element in sociological research is interconnected and sequential, rooted in the theoretical approach. While artificial intelligence can play a valuable role in facilitating organization, streamlining analysis, and saving time, it should never be fully depended upon. Human intelligence retains its indispensable place—one that no form of artificial intelligence can replicate or surpass.

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