

The Development of the Field of Political Science Between Epistemological Accumulation and Epistemological Rupture

تطور مجال علم السياسة ما بين التراكمية المعرفية والقطيعة الإبستمولوجية

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Abstract:

This study examines the development of political science, focusing on the interplay between cumulative knowledge and epistemological rupture in shaping new intellectual trajectories within the field. It seeks to identify the key epistemological milestones that have influenced political science as a distinct discipline and to analyze how these factors - cumulative knowledge and epistemological rupture - impact the evolution of political ideas, theories, and research methodologies. Utilizing historical and comparative analysis, the study compares various intellectual traditions and examines their interactions with cumulative knowledge and epistemological discontinuity across different historical contexts.

The findings reveal that political science has evolved through a dynamic exchange between these elements, fostering the emergence of new theories and the transformation of established schools of thought.

Key Words: Epistemology; Development of political science; Cumulative knowledge; Epistemological rupture; Epistemological revolutions.

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Introduction:

Political science, as an independent discipline distinct from philosophy and law, has undergone significant epistemological transformations. It has evolved through classical theoretical reflections, realist and behavioral analyses, and critical and postmodern approaches. These developments have positioned political science as a continuously advancing field of study. The discipline has seen persistent conceptual, methodological, and theoretical growth. This progression is characterized by an ongoing dialogue between diverse intellectual approaches. Each stage of its evolution has integrated cumulative knowledge while also exhibiting moments of epistemological rupture. Together, these elements underscore the dynamic nature of political science as a field of knowledge.

On the one hand, cumulative knowledge refers to the systematic process of building knowledge through the accumulation of information and ideas, where prior findings and experiences provide the foundation for further studies, research, and theoretical advancements. On the other hand, epistemological rupture represents moments of significant intellectual rupture, marked by radical shifts in thought that transcend existing theories and concepts. Such breaks lead to the formation of new foundational perspectives, rejecting established analytical and methodological frameworks in favor of innovative paradigms.

Political science has undergone significant development across different eras. Initially rooted in philosophical and ethical analyses, the discipline's early foundations were established by thinkers such as Plato and Aristotle, who formulated theories on government and the relationship between the state and the citizen. Over time, through the Renaissance and Enlightenment, political science entered a new phase, marked by emerging concepts of individual rights and public freedoms. In the modern era, the discipline evolved further with the rise of political realism and behaviorism, leading to increased professionalism and scientific rigor in both subject matter and methodology. Subsequently, in the postmodern period, political science experienced new transformative stages, characterized by post-behaviorism and the restructuring efforts of perestroika.

From this perspective, the importance of this study lies in analyzing how cumulative knowledge and epistemological rupture have interacted to shape new trajectories of thought within political science and to establish it as an independent field of knowledge. Cumulative knowledge provides the foundational building blocks for development, while rupture offers opportunities for renewal and intellectual creativity. This interaction between the two expands the horizons of scientific research in the field and enhances understanding of the complex political dynamics that confront it.

Accordingly, we pose the following research problem: What are the key epistemological milestones that contributed to the formation of political science as an independent academic field? And how have the dynamics of cumulative knowledge and epistemological rupture influenced this development?

To answer this research problem, the study is structured as follows:

Firstly. A conceptual approach to the study.

Secondly. The development of the field of political science according to the principle of epistemological accumulation.

Thirdly. Cognitive Revolutions and Paradigmatic Shifts in the Development of Political Science.

Firstly: A Conceptual Approach to the Study

1. Political Science: Political Science is the study of governments, public policies and political processes, systems, and political behavior. Political science subfields include political theory, political philosophy, political ideology, political economy, policy studies and analysis, comparative politics, international relations, and a host of related fields. Political scientists use both humanistic and scientific perspectives and tools and a variety of methodological approaches to examine the process, systems, and political dynamics of all countries and regions of the world.¹

Political Science is an advanced field of knowledge, which uses both qualitative and quantitative tools and reasoning to prove the validity of its theories and models with the help of data, which it collects to empirically test its theories and models against them.²

2. Epistemology:

The term *epistemology* (from the French *épistémologie*) is derived from the Greek word *epistēmē*, meaning "science" or "scientific knowledge," and the suffix -logie, which originates from logos, signifying "theory" or "critical study." Etymologically, then, epistemology refers to the "theory of knowledge" or "theory of scientific knowledge."³

The word *épistémologie* first appeared in the supplement to the *Dictionnaire de la langue russe* illustré in 1906. Before that, it was absent from earlier dictionaries and encyclopedias. Although a relatively modern term, epistemology as a conceptual field predates its lexical formalization. Historical evidence suggests that the term was used at least half a century before it appeared in dictionaries. The Scottish philosopher *James Frederick Ferrier* is often credited with coining the term in his 1854 work *Institutes of Metaphysics*, where he distinguished between two central branches of philosophy: epistemology and ontology.⁴ Returning to the Greek roots of the term, we find that:

- *Epistēmē* refers to the object of epistemology, namely knowledge or science.
- *Logos* pertains to the method or approach by which knowledge is examined.

Initially, we noted that *epistēmē* in classical Greek refers broadly to knowledge or science. However, the French philosopher *Michel Foucault* reconceptualized the term, assigning it a more context-specific meaning. In Foucault's framework, *epistēmē* refers not to knowledge in the abstract, but rather to a particular configuration or structure of knowledge characteristic of a given historical period. For instance, Foucault discusses the *epistēmē* of the Renaissance and that of the

modern age, indicating that each era possesses its unique cognitive framework or rationality.⁵

Foucault's definition of *epistēmē* does not diverge entirely from its original Greek meaning. It is clear that, for the Greeks, there was a strong equivalence between knowledge (*gnosis*) and science (*epistēmē*). In the classical era of Socrates, Plato, and Aristotle, and even before them, knowledge essentially meant science, and vice versa.

However, the contemporary usage of the term *science* has shifted considerably from its classical origins. Today, it predominantly refers to disciplines such as physics, mathematics, and the life sciences, as well as the social sciences that have sought to emulate their methodologies, such as sociology, psychology, and history. This modern conception of science only began to crystallize relatively late, around the 18th century, when Immanuel Kant declared that metaphysical knowledge was neither useful nor productive. He argued that human knowledge must be shaped according to a scientific model, exemplified by *Newtonian* mechanics.⁶

In this context, Auguste Comte offered a clearer and more systematic framework. According to this French thinker, human thought evolved through three distinct stages: the theological stage, the metaphysical stage, and finally the positive stage, which he regarded as the pinnacle of intellectual maturity. The positivist stage, in Comte's view, corresponds to science, particularly as represented in disciplines like astronomy, mathematics, physics, chemistry, and the life sciences. Motivated by his belief in the necessity of scientific knowledge, as we understand it today, Comte introduced a new science: social physics, later known as sociology.⁷

It follows, then, that what we consider *true science* forms the core concern of epistemology. Hence, we speak of the epistemology of mathematics, the epistemology of the natural sciences, and the epistemology of the human sciences. This conclusion does not stray from the original Greek framework that birthed the concept of *epistēmē*, given that the Greeks themselves embraced rigorous fields such as astronomy and mathematics as central branches of knowledge.

André Lalande, in his *Philosophical Dictionary*, defines epistemology as "the philosophy of sciences," but in a more precise sense. According to him, epistemology is not simply the study of scientific methodologies, which is the domain of methodology, a subset of logic, nor is it a speculative or intuitive synthesis of scientific laws,⁸ which would fall under applied logic or, in the positivist sense, descriptive philosophy or the philosophy of evolution.⁹

Rather, epistemology is fundamentally a critical inquiry, a reflective field that rigorously examines the principles, branches, and outcomes of various sciences. Its purpose is to establish their logical foundations, assess their value, and determine the degree of their objectivity.¹⁰

Epistemology, particularly following the significant scientific advancements in the field of physics, has evolved into a discourse concerning the very foundations of scientific inquiry itself, most notably in the works of Gaston Bachelard.¹¹

Generally, Epistemology is “theory of knowledge”. It is generally believed that the concept of epistemology was also first expounded by Parmenides by making systematic distinction between knowledge and belief. Some degree of belief is normally at play in what we know about the world around us.

The relation between knowledge and belief can be either causal or constitutive. Epistemological debates revolve around one or more of the following three questions:

What is knowledge? What can we know? And how do we know what we know? For the purpose of this study, we’ll take Norman Blaikie’s definition: Epistemology refers to: “ the claims or assumptions made about the ways in which it is possible to gain knowledge of reality ”.¹²

3. Cumulative Knowledge (Cumulativity):

Proponents of this perspective—often referred to as “*continuists*”—conceive the development of science as a linear and progressive accumulation of knowledge. In their view, each scientific episode is both a continuation of the one preceding it and a precursor to the one following it. This school of thought emphasizes structured scientific methodologies such as experimentation, quantification, and systematic observation. Figures like D’Alembert and Auguste Comte are representative of this view. Within this framework, science is seen as a continuous act, at least in terms of its structural methods; however, continuity is more evident at the level of contingent, contextual methodologies rather than at the level of conceptual breakthroughs.¹³

4. Epistemological Rupture (Discontinuity):

In contrast, the “non-continuists” assert that the evolution of scientific knowledge is marked by clear ruptures and separations between distinct scientific paradigms. Thomas Kuhn, for instance, posits that such breaks are especially apparent during major scientific revolutions, while Gaston Bachelard sees them occurring across all levels of scientific development, even generalizing the concept to encompass all forms of transformation in scientific thought. According to this viewpoint, the emphasis shifts from methods to scientific concepts themselves. Bachelard, for example, traces the evolution of scientific concepts to demonstrate the existence of definitive epistemological breaks between successive scientific frameworks. Thus, from this angle, discontinuity is a more accurate descriptor.¹⁴

Take, for example, the concept of mass:

- For Newton, it is a positive, fixed quantity of matter.
- For Einstein, it becomes a positive but dynamic quantity.
- For Dirac, it evolves into a negative and dynamic one.

This exemplifies how epistemological breaks imply a transition from one dominant mode of knowledge, governed by specific principles, beliefs, and methodologies, to a new framework characterized by entirely different rules and conceptual foundations. What facilitates this transition is the increased proximity to scientific truth and the development of more rigorous standards of validation.

An epistemological break thus represents a shift from a spontaneous, ideologically driven practice of science to a theoretically grounded, critically

reflective one. It is in this latter phase that knowledge begins to qualify as truly scientific, in the strictest sense of the term.¹⁵

5. Scientific Revolution:

The term **scientific revolution** refers to a series of non-cumulative transformative events wherein an existing epistemic paradigm is wholly or partially replaced by a fundamentally different one.¹⁶ These revolutions reflect profound shifts within a scientific field, leading the scholarly community within a particular scientific discipline to reject the prevailing paradigm and adopt a new, often conflicting, framework. This transition generates substantial and foundational changes in the intellectual landscape, both in terms of theoretical underpinnings and methodological approaches that structure inquiry within the discipline.

Secondly: The Development of Political Science According to the Principle of Knowledge Accumulation:

The political phenomenon is intrinsically linked to human life and the evolution of societies. Its origins trace back to the very emergence of human communities and have developed in tandem with the progression of human civilization. Early interest in political organization and the evolution of societal structures was a central concern of philosophical and political thought, reflecting efforts by philosophers, scholars, and political theorists to understand and shape modes of governance and societal order. This intellectual engagement persisted until the maturation of social and human life in the mid-19th century, when political science gradually emerged as an independent academic discipline. Before this shift, most European universities taught politics and governance as a subfield of moral philosophy.

In the context of historical development based on the principle of cumulative knowledge, political science has long been the subject of debate among scholars, particularly concerning whether it is an ancient or a modern discipline. Two main perspectives have emerged in this debate:¹⁷

1. The Positivist Perspective, which views political science as a relatively modern discipline shaped by recent methodological developments.

2. The Classical Perspective, which takes a more realistic and historically grounded view, asserting that political science is an ancient field with longstanding conceptual and methodological foundations. Proponents of this view argue that every field of knowledge possesses a distinct identity composed of both subject matter and method—and that political science has historically fulfilled both criteria.

In light of these competing perspectives, this study adopts a moderate position: political thought, while not always formalized as "political science," has existed since antiquity. Efforts to articulate and consolidate its foundations, conceptually and methodologically, have been continuous.

The traditional phase of political science refers to the era preceding the behavioral revolution, which marked a significant paradigm shift in the discipline. Without question, the origins of political science are deeply embedded in Greek philosophy. Among its most influential figures are **Plato**, through his seminal work

The Republic, and Aristotle, through *Politics*. These texts are widely regarded as foundational to the discipline, offering comprehensive insights into key political concepts such as the nature of power, forms of governance, the relationship between state and society, and the intersection of politics and economics.¹⁸

Although political studies at that time remained largely philosophical in nature, this did not prevent the emergence of some features of specialization in political knowledge, particularly the type that leaned toward empirical or scientific inquiry. After Athens' defeat in the Peloponnesian Wars, its imperial ambitions collapsed, leading the Greeks to focus on intellectual pursuits. Plato's Academy became the first formal philosophical school, although Isocrates had established a school of rhetoric a few years earlier. Aristotle's school at the Lyceum opened about fifty years later. These developments were followed by the establishment of other schools, such as the Epicurean and Stoic schools, all of which had a lasting influence on subsequent intellectual epochs due to the academic trend toward specialization.¹⁹

These Greek schools played a pivotal role in shaping the philosophies of later civilizations. Just as they served as a foundation for Roman philosophy, they also influenced the development of European intellectual heritage during the Renaissance and Enlightenment, particularly in fields such as politics and the social sciences.

Thus, from a historical perspective, the development of political science can be studied through its subject matter and methodology, beginning with philosophy, which once encompassed all fields of knowledge. Political science, like many other disciplines, originated within philosophy but gradually developed its own core and methodological identity. This identity can be traced back to Aristotle's political writings, which laid the foundational principles of comparative political analysis. Aristotle is often regarded as the founder of political science, particularly for his comparative study of the constitutions of Greek city-states. His analysis was informed by the observations of the Greek historian Herodotus and by Plato's *theoretical framework*, which included concepts such as democracy, monarchy, and other regimes. Aristotle blended Plato's experimental approach with empirical case studies. He sent his assistants across the Mediterranean to collect the constitutions of 158 city-states to determine which systems best promoted political stability. These investigations formed the basis of his seminal work *Politics*, which established a scientific method for studying political phenomena that remained influential for centuries.²⁰ These were not merely philosophical inquiries; they were genuinely empirical studies rooted in historical reality.

Aristotle followed Plato's general structural outline of political regimes but differed significantly in his emphasis on the role of wealth. For Aristotle, the crucial question was not whether the few or the many ruled, but rather how economic power was distributed among those in power. He concluded that the best form of government was one in which wealth was neither excessively concentrated nor overly scarce. The ideal polity was one where the middle class dominated, ensuring social stability.²¹

Aristotle classified forms of government into three legitimate types—monarchy, aristocracy, and polity (popular government)—and three corrupt forms—tyranny, oligarchy, and democracy (in its degenerate form). He assessed these regimes using both class dynamics and their regard for the public interest. Aristotle's comparative methodology, grounded in observation and empirical analysis, brought him closer to legal and institutional design than to abstract philosophical speculation. This marked a significant departure from Plato's idealistic approach. While **Plato** envisioned politics as it ought to be and constructed normative models accordingly, **Aristotle** approached political systems as they existed. He studied them as natural scientists would: observing, collecting data, and building theories from real-world phenomena.²²

This Aristotelian approach, known as the comparative, observational method, became the dominant model in political studies for centuries, particularly in the study and classification of political systems. Modern political science has largely retained this Aristotelian legacy. Comparative analysis has made a substantial contribution to the advancement of political knowledge. Indeed, political science has never relinquished the use of comparison at any stage of its development. Especially in the field of comparative politics, one cannot fully grasp a political system without comparing it to others, exploring both similarities and differences—a method adopted by nearly every political thinker since Aristotle.²³

Despite political knowledge being long treated as a branch of moral philosophy or law, particularly within European universities, this did not hinder the growth of comparative political literature. Studies on institutions, constitutions, and governance continued to draw on Aristotle's analytical approach. His legacy laid the groundwork for key components of political inquiry, including theory building, hypothesis formulation, analytical frameworks, and empirical investigation. Many of the problems he addressed and the methods he employed continue to influence contemporary political science research.²⁴

During the Roman era, political studies experienced a new phase of development, notably influenced by three key political thinkers: Cicero, Polybius, and Tacitus. Cicero's foremost contribution was his idea of natural law, which posited that universal laws apply to all societies, including those outside of Rome. He also delved into normative perspectives on the ideal form of government. In his comparative study *The Republic and the Laws*, Cicero argued that the best system for the Roman Republic was a mixed regime—combining aristocratic, monarchical, and popular (*i.e., democratic or polity-based*) elements. In doing so, he built upon the comparative method originally developed by Aristotle.²⁵

However, political thought and political knowledge rapidly declined following the fall of Rome at the hands of the Germanic Gothic tribes in 410 CE. As a result, political knowledge became largely confined, giving way to religious thought. Despite this intellectual decline, the research methodologies laid down by early thinkers—especially Aristotle's method—endured. This regression significantly

affected political knowledge and political studies throughout the medieval era and the Middle Ages, during which political questions were primarily addressed through theological inquiry. During this period, the most prominent thinker was Saint Augustine, who played a key role in transmitting classical political thought to the Middle Ages. His comparative inquiries extended beyond the realm of specific political regimes to encompass a broader comparison between Christian nations and non-Christian peoples.

In medieval political thought, Thomas Aquinas sought to revive Aristotle's method of abstraction, aiming to derive general principles such as justice, just war, and the public good. He reached these abstractions through comparative analysis between Christian and non-Christian societies. Similarly, Niccolò Machiavelli, in his *Discourses*, categorized the dominant political regimes in the Italian city-states into six types, including both virtuous forms and their corrupt counterparts. The virtuous forms—enlightened monarchy, aristocracy, and democracy—when corrupted, devolve respectively into tyranny, oligarchy, and mob rule (chaotic populism).²⁶

The true revival of political studies, however, occurred with major transformations in the world, particularly during the period spanning the 15th to the 17th centuries. This era saw Europe's contact with a wide range of political systems, especially those of the East, such as in China, following the discovery of the "New World." At the same time, modern states began to emerge in Europe after the protracted wars between Catholics and Protestants during the 16th and 17th centuries. These conflicts effectively led to the formation of most of Europe's modern states, with boundaries resembling those we recognize today. Additionally, the scientific method was revived during the Renaissance and reinforced by subsequent scientific discoveries, ushering in a new era in political thought and studies.²⁷

In the 16th century, the French thinker Jean Bodin, following in Aristotle's footsteps, expanded upon Machiavelli's work by studying European governments and comparing them based on their form, function, and social depth. From this comparative analysis, he developed his central concept—the theory of sovereignty—defined as an indivisible and unrestricted power necessary for the creation of laws within the state. He expounded this idea in his seminal work *The Six Books of the Republic*.

In the 18th century, Montesquieu emphasized the importance of studying and comparing foreign states to derive specific truths and conclusions. In his major work, *The Spirit of the Laws*, he classified political systems into republics, monarchies, and despotisms. He further subdivided republics into aristocratic and democratic forms. In addition to using comparison, Montesquieu analyzed political phenomena by highlighting the influence of environmental variables—such as climate, geography, population, lifestyle, customs, and traditions—on political structures.²⁸

The 19th century marked a new developmental turn in political science, with notable contributions from Auguste Comte and Alexis de Tocqueville. Political science at that time began to take more solid steps toward becoming a full-fledged

discipline. The idea of the “natural laws of human society,” which had captivated 17th- and 18th-century thinkers, grew increasingly plausible, as philosophy began to recede in its explanatory dominance. Comte called on scholars to elevate political science to the level of observational sciences, asserting: "This science has not yet been established; it must be established "²⁹.

Alexis de Tocqueville applied Comte’s scientific method in his 1835 work *Democracy in America*, in which he compared the American political system with various European systems. He opposed fragile monarchies and aristocracies and argued that the true internal threat to democratic systems stems not from minority tyranny but from the tyranny of the majority. Tocqueville rejected classical categorizations such as tyranny and despotism, viewing them as inapplicable to the modern, equality-based societies he termed democratic societies. However, he also warned of the potential dangers of liberty, which could ultimately lead to democratic despotism.

Tocqueville shared with Montesquieu a similar social and class background and adopted the same Aristotelian method of classifying political systems based on two main criteria: the existence or absence of freedom and the number of individuals participating in political life. His comparative approach operated on two levels: first, comparisons within a single unit over time, and second, comparisons between two states through the lens of a third.³⁰

Based on the foregoing, it becomes evident that political studies (or political science) during these historical phases evolved according to the principles of cumulative knowledge and continuity. Aristotle employed the comparative method in describing the constitutions of Greek city-states. Machiavelli later used it in studying the Italian principalities. Montesquieu applied it to analyze political systems and their relationship with morality and environment, while Tocqueville compared the United States to European states. These classical studies marked the early emergence of political science in Western thought and were largely limited to specific cases within Europe and North America. These early studies were characterized by a strong focus on legal and institutional dimensions.³¹

Thirdly: Cognitive Revolutions and Paradigmatic Shifts in the Development of Political Science

Scientific progress is normally portrayed as a series of stable, rational choices between competing theories, research programs, or research traditions within a discipline. Progress of that sort cannot occur in political science because any comparisons among research traditions can only proceed in the context of a set of empirical problems which are socially determined. Political scientists have a say in this determination--but so does the larger society in which political science is embedded. The rationality of any choice among research traditions is therefore historically contingent. The progress of political science may be reconceptualized as an increasing capacity to cope with contingency in its empirical problems and its epistemological obstacles.³²

The field of political science has remained relatively unstable as a knowledge domain, experiencing various epistemological movements and scientific trends aimed at restructuring its epistemological framework, including its theoretical foundations and research methodologies. These shifts have contributed to its development as an independent discipline. Its intellectual output and methodological tendencies have fluctuated between a continuous/accumulative perspective and an epistemological crisis leading to an epistemological/cognitive rupture with prior knowledge, which serves to deconstruct and reframe the core assumptions of previous theories and epistemological frameworks, as well as the research methods prevailing in the field of political science. This results in new intellectual perspectives, systems of thought, and research methodologies.

The epistemological rupture and scientific revolution that occur within a given scientific field, which lead to the evolution and change of the knowledge structure and research methodologies, are connected by Thomas Kuhn in his book *The Structure of Scientific Revolutions* (1962) to the concept of the "paradigm". He defines it as: "a framework for explaining the development of science and knowledge through successive revolutions that bring about fundamental changes in the basic rules, subjecting them to rigorous scrutiny and reworking the core hypotheses of previous theories and epistemological frameworks."³³

Kuhn found, in his experience, that natural science communities were less contentious than social science communities regarding what constitutes significant problems and the proper methods of inquiry; it was an attempt to explain this difference that led him to his image of a paradigm and his argument about revolutionary scientific change.³⁴

Kuhn's concept of the "paradigm" rejected the traditional view that knowledge and science progress in a continuous, upward trajectory, a notion inherited from the Enlightenment era. According to Kuhn, the epistemological rupture and scientific revolution within political science: "do not merely mean the renewal of research programs—i.e., the formulation of a new research agenda for the field on the ruins of prior achievements. Rather, it constitutes a true cognitive revolution that results in a transformation of the guiding epistemological model, which serves as the prevailing intellectual authority within the field of political science."³⁵

From this perspective, it is evident that political science, although an unstable cognitive field, has witnessed movements aimed at reshaping its "state-centric" nature. There have been five prominent movements that have brought about fundamental changes in political science, according to Kuhn's concept of paradigm shifts—³⁶that is, the development of political science through scientific revolutions and epistemological ruptures, leading to a shift from an old guiding epistemological model to a new one. These transformations occur through the crisis in knowledge within the field, culminating in a scientific revolution that challenges the prevailing theoretical frameworks and research methodologies in political science. These movements are:

1. Statism
2. Pluralism
3. Behaviorism
4. The Shift Towards a New Political Science
5. Political Science Perestroika

It is important to note that, of these five movements, we will not discuss "Political Science Perestroika" as its results have yet to fully materialize. According to Kuhn's model of scientific revolution, only the first two movements, Statism and Behaviorism, were successful in effecting change. This success can be attributed to the lack of resistance these movements faced within the field of political science. While both movements were later criticized and resisted by other theoretical schools, they ultimately achieved their cognitive revolution. Many scholars indeed attempted to change the nature of political science in the United States, but few succeeded. These revolutionaries, working collectively, sought to formulate a new research agenda for the field, based on the accomplishments of previous intellectual efforts. However, these endeavors did not rise to the level of scientific revolutions in the Kuhnian sense.³⁷

Therefore, the field of political science has witnessed five major cognitive revolutions aimed at altering its epistemological and methodological structure. It is crucial to distinguish between scientific revolutions (in Kuhnian terms) and research programs (in Lakatosian terms), as this distinction serves as a criterion for identifying the true nature of these cognitive revolutions. The formulation of a new research program, such as structural functionalism or biopolitics, does not qualify as a scientific revolution in the Kuhnian sense, as it does not represent a transformation in the guiding epistemological model (the paradigm). Based on this criterion, only five intellectual movements have successfully brought about an epistemological rupture in the field of political science.³⁸

1. First

Statism:

The origins of political science as a field can be traced back to the late 19th century, where it became a discipline focused on the state, seeking to professionalize and elevate political analysis by sidelining amateurs who lacked methodological rigor and academic grounding. During this period, the concept of the state dominated American political discourse, contributing to the shaping of the field's academic foundations. The vision of the state and its role was not entirely new, as it had been a central focus of earlier constitutional debates, particularly among the Federalists. However, scholars such as Francis Lieber, who became the first professor of political science at Columbia University in 1857, and Woodrow Wilson, among others, centered their work around the state, aiming to create a unified nation-state and virtuous citizenship. The main task of political science during this period was:³⁹

A. to establish a unified nation-state and ideal citizenship. Wilson's vision, for example, included a political system shaped by disciplined political parties that proposed rational policies, where informed voters would elect representatives to enact

policies, executed by a bureaucratic apparatus characterized by expertise. This framework aimed to counteract corruption, patronage, and sectionalism in the political system. Wilson's work in *Parliamentary Government* (1885) reflected these goals, focusing on analyzing American institutions and identifying flaws like corruption and favoritism. In particular, the movement sought to reform the Madisonian system, which had become unsuitable for the social transformations brought by the Industrial Revolution.

B. The establishment of a unified nation-state supported by a cohesive and skilled national community was a central goal, with political science playing a pivotal role in realizing the "will of the state." The statist orientation sought to combat corruption, clientelism, party machinery, favoritism, and regionalism by curbing their influence.

C. The statist movement also aimed to reform the Madisonian system (named after Thomas Madison, one of the Founding Fathers of the United States), which had become increasingly inadequate in addressing the social transformations triggered by the Industrial Revolution. Additionally, some scholars within the statist school, who regarded the state as sacred, opposed the federal nature of the American state, advocating instead for a more unified United States.

Accordingly, it becomes clear that statism, as the intellectual approach that laid the foundations of political science, did not seek to radically alter the status quo of the discipline. Rather, it aimed to consolidate its structure in the first place. However, its exclusion of amateur political analysts—those lacking methodological rigor and formal academic training—from contributing to the field, ironically positioned these excluded individuals as a revolutionary epistemological movement. This emerging trend, comprised primarily of amateurs in political analysis, focused largely on Christian reformist ideals and engaged in fieldwork aimed at promoting public welfare. Yet, it lacked a serious and in-depth engagement with American politics, failing to pose critical questions about the political realities of the United States.⁴⁰

In this way, the founders of the professional and disciplinary orientation of political science helped to establish a new, intellectually transformative agenda. A key feature of this agenda was the centralization of the concept of the state, aimed at giving political science a redefined epistemological identity. This statist orientation did not encounter resistance from within the academic field. Those who were displaced by it remained outside the boundaries delineated for this emerging science.⁴¹

2. Pluralism:

The United States had a political system that was far more pluralistic than statist had anticipated. While statist acknowledged the existence of pluralism, they viewed it as fragmentation—a problem to be solved rather than something to be embraced. This perspective is highlighted in the work of Arthur Bentley, particularly in his book *The Process of Government* (1908), where he criticized the dominance of interest groups in American politics, which the behavioralists consider one of the

pioneers of pluralistic behavioralism. In another book he later published, titled *Masters, Users, and Makers...* Bentley expressed his condemnation of the dominance of interest groups over American politics.⁴²

Arthur F. Bentley's *The Process of Government*, little noticed at the time of its publication in 1908, greatly influenced the development of political science from the 1930s to the 1950s. Bentley rejected statist abstractions in favour of observable facts and identified groups and their interactions as the basis of political life. Group activity, he argued, determined legislation, administration, and adjudication. In emphasizing behaviour and process, Bentley sounded themes that later became central to political science. In particular, his insistence that "all social movements are brought about by group interaction" is the defining feature of contemporary pluralist and interest-group approaches.⁴³

Normative pluralism gained increasing prominence with the emergence of works by Harold Laski (1917) and Mary Parker Follett (1918). Both Laski and Follett were influenced by the philosophy of William James, which emphasized the existence of multiple ways through which individuals could manage their affairs. From this, it becomes clear that the concept of plurality, for proponents of pluralism, is not grounded in the mere multiplicity of interests, but rather in the multiplicity of means. Follett, in particular, advocated for organizing society into groups from the bottom up, opposing the model of social engineering that operated in the reverse direction—from the top down. In this respect, she diverged from the statists in their veneration of the paternalistic role of the state.

Both Laski and Follett represented the intellectual vanguard of the pluralist revolution within the academic field of political science. However, their aspirations did not gain substantial recognition within the discipline until the 1950s. By that time, the adopted form of pluralism was one grounded in the multiplicity of interests, rather than in the diversity of social experiences that lead to different value systems—that is, value pluralism.⁴⁴ Building on this, and given the lack of scholarly adoption of pluralist propositions, the rise of pluralism cannot be classified as an epistemological revolution within the field of political science. Pluralists failed to establish a coherent research tradition capable of framing the work of political scientists at the time. Can a revolution truly occur without drawing attention? Moreover, as Thomas Kuhn suggests, those responsible for the success of a new paradigm must be acknowledged and celebrated for their contributions—something that clearly did not happen with the pluralists.⁴⁵

Therefore, the discussion should center on the attempted revolution led by advocates of normative pluralism—that is, pluralism grounded in value diversity rather than in the mere multiplicity of interests. This attempt ultimately failed due to intense resistance from the dominant research tradition of the time: statism, which centered on the state and rejected the legitimacy of actors other than the state.⁴⁶ This resistance was particularly strong from key figures in statism such as Charles Beard, Walter Shepard, Francis Coker, and William Yandell Elliott. Despite the eventual

decline of its dominance, the statist research tradition continued to exert influence over political science until its revival by Theodore Lowi through his seminal work *The End of Liberalism*. Interestingly, although Lowi was associated with what came to be known as the "Third Option"—a reformist trend in political science—his work marked a brief resurgence of statist thought. Nevertheless, after nearly half a century of state-centric dominance, the concept of "the state" nearly vanished from academic discourse, remaining in use mainly within the field of international relations.

3. Behaviorism:

Behavioralism emerged as a reaction to traditional political science (statism, pluralism), which was dominated by various schools of thought focused on studying political science from the perspectives of history, law, administration, institutions, and social Darwinism. In this period, the state was considered the fundamental unit of analysis, and the process of comparison in political science was largely limited to the major powers—France, Britain, Germany, and Russia—from a historical, legal, and descriptive standpoint.⁴⁷

Behavioralism, is the view that the subject matter of political science should be limited to phenomena that are independently observable and quantifiable. It assumes that political institutions largely reflect underlying social forces and that the study of politics should begin with society, culture, and public opinion. To this end, behavioralists utilize the methodology of the social sciences—primarily psychology—to establish statistical relationships between independent variables (presumed causes) and dependent variables (presumed effects). For example, a behavioralist might use detailed election data to argue that voters in rural areas tend to vote for candidates who are more conservative, while voters in cities generally favour candidates who are more liberal. The prominence of behavioralists in the post-World War II period helped to lead political science in a much more scientific direction. For many behavioralists, only such quantified studies can be considered political science in the strict sense; they often contrasted their studies with those of the so-called traditionalists, who attempted to explain politics by using unquantified descriptions, anecdotes, historical analogies, ideologies, and philosophy. Like behaviourism in psychology, behavioralism in political science attempted to discard intuition, or at least to support it with empirical observation. A traditionalist, in contrast, might attempt to support intuition with reason alone.⁴⁸

Behavioralism can be defined as: focusing research on "political behavior"; advocating methodologically for "scientific approach"; promoting a political message that encourages "scientific thinking"; and offering an organizational view of the "political system."

Although behavioralists focus on the individual as the unit of analysis, there was no issue in studying "individuals within the framework of the group working toward collective goals." Both "Robert Dahl" and "David Truman" were prominent behavioral scholars in the early stages of behavioralism during the 1950s. Truman, in

particular, chaired the Political Behavior Committee of the "Social Science Research Council."

Behavioralism also adopted pluralism in its focus on interests rather than values, specifically pluralism that falls under the umbrella of consensus regarding foundational principles between conflicting economic interests. By the 1960s, numerous writings celebrated the triumph of behavioralism, giving the impression that it was a revolution that gained the approval of academics due to its success in reshaping the research agenda, resulting from the contributions of both proponents and opponents alike.⁴⁹ The rhetoric of the behavioral revolutionaries spoke of directing their cognitive revolution against "traditional political science," which relied on the historical method and was excessively realistic, according to David Easton. Easton launched one of the fiercest intellectual attacks on the status quo in the field of political science in 1953 with his book *The Political System*, which led to his recognition as the leading theorist of the behavioral movement. In 1984, Easton published another work discussing traditional political science (as it prevailed in the 1920s), where he criticized it for its excessive focus on parties and pressure groups.

Thus, what makes behavioralism a revolution is that it introduced radical changes to previously existing trends in political science. These selected areas include behavior, scientific methodology, pluralism, and the shift from description to explanation in theoretical aspects. Starting with behavior, behavioralists relied on survey studies based on a broader statistical community and increased the frequency of quantitative studies, which dominated the pages of major academic journals in the field. However, on the other hand, the dominance of behavioralists in the discipline contributed to a decline in studies focused on analyzing public government policy.⁵⁰

As for the new scientific orientation of the behavioralists, it helped them secure new resources for funding their research, especially from the "National Science Foundation." Regarding the point of pluralism, which focuses on multiple actors in the analysis, the study of behavior overshadowed the study of institutions, though institutions did not disappear from the research agenda. Therefore, what should be noted about these transformations introduced by behavioralists is that they did not involve a fundamental change but rather a shift in focus from one aspect to another.

Thus, among the four points previously mentioned, the realm of theory stands out as the only domain that introduced innovation, granting behaviorism the status of a revolution. This led to the establishment of political theory as an independent and structured subfield of political science. Before the rise of behaviorism, theorists—especially during the dominance of the "statists" and "pluralists"—were central figures in debates surrounding the identity of political science. However, by the early 1950s, intellectuals who had migrated to the United States, such as Hannah Arendt, Leo Strauss, and Eric Voegelin, introduced a new class of thinkers opposed to liberalism.⁵¹

The shift of the academic community in political science toward behaviorism in the mid-20th century can thus be regarded as a scientific revolution, aimed at

rationalizing the political process, as described by Charles Merriam, and eliminating all that was deemed irrelevant to political practice, thereby unlocking the full political potential inherent in human nature. Robert Dahl argues that behaviorism was a successful revolution according to Thomas Kuhn's model of scientific revolutions, as it garnered the support of an enthusiastic young cadre of scholars and created a new agenda for the discipline. As such, the behavioral revolution resulted in a cognitive break from traditional methodologies, redefined the foundational components of the field, and even redefined political science itself.

The focus of political science shifted from an emphasis on power, state, or authority to a study of the allocation of values through political authority. In this way, earlier units of analysis—such as the state, government, nation, or institutions—were surpassed in favor of new analytical units. For instance, with David Easton, the concept of the political system emerged, and comparative politics expanded from its narrow focus on European systems to a more inclusive framework capable of addressing non-European systems, thus enabling cross-cultural and cross-regional comparisons.⁵²

According to Katz and Eldersveld, the behavioral approach aims to study "the behavior of individuals or groups of individuals as the basic unit of analysis." For Robert Dahl and David Easton, the primary goal of political behavior is to explain behavior from a neutral and unbiased perspective, employing methods such as sampling, expanding statistical analysis, interviews, and more.⁵³

Gradually, behaviorism came to dominate the discipline. However, this did not shield it from criticism, which began to intensify in the early 1960s. These criticisms, however, served only to affirm the dominance of behaviorism and its success in reshaping the research agenda in political science, as the criticism from academic circles grew.

On the other hand, this time the criticism did not come from "traditionalists with a historical inclination," but rather from left-wing researchers who called for a more active role for political science by imbuing it with a critical perspective and redirecting researchers' focus toward societal issues. They argued that the behaviorists, by what they called "value neutrality," inadvertently reinforced the status quo in American politics, even though this situation was far from being ideal.⁵⁴

4. Post-Behavioralism in Political Science: New Political Science

The criticisms from left-wing scholars towards behaviorism led to the emergence of what is known as the "Conference for a New Political Science," which sought to outline the future direction of political science and reorient its focus. The conference was held in 1967 during the annual meeting of the American Political Science Association (APSA), and it was led by Peter Bachrach, Christian Bay, Theodore Lowi, Michael Brent, Alan Wolfe, Sheldon Wolin, and included a prominent figure in international relations, Hans Morgenthau, who was also one of the opponents of the Vietnam War. The conference even put forward a candidate for the presidency of the APSA.

Among the conference members were several political theorists determined to bring discussions and critiques of American liberal democracy to the forefront of academic debates after being largely confined to the realm of political science. In promoting their stance, the members of this "conference" aimed to address what they saw as shortcomings in the "behavioral approach." They shifted attention toward the social issues and political crises of the time, and advocated for a political science that took a unified, collective stance on controversial political matters, such as the Vietnam War, racial discrimination, poverty, as well as environmental and women's issues.⁵⁵

Although the post-behavioralists did not universally reject the scientific approach, they emphasized the need to reorder priorities, placing "commitment to societal issues" ahead of "scientific objectivity." They argued that the usefulness of research findings should be assessed based on their relevance to addressing these societal concerns. Thus, the key features of post-behavioralism include:⁵⁶

- Opposition to the value-neutral stance of social sciences:** Post-behavioralists strongly opposed the behavioralists' attempts to render political science a value-neutral science. They contended that values should not be sacrificed for the sake of scientific neutrality.

- Protest Movement:** Post-behavioralists emphasized that politics should be relevant to society. Easton argued that the role of intellectuals is to protect the human values of civilization, such as justice, freedom, equality, and democracy, among others.

- Future-Oriented Study:** Post-behavioral scholars sought to direct research on social and political problems toward the future, aiming to anticipate and predict upcoming events and provide warnings.

- Purposeful Research:** According to post-behavioralism, research should be relevant, purposeful, and address the issues that society faces. It should also offer practical solutions that can be implemented by policymakers.

- Action-Oriented Work:** Post-behavioral scholars emphasized the importance of action over speculative knowledge. They argued that knowledge for the sake of knowledge is meaningless; rather, knowledge should serve a purpose. When knowledge is used for action, it can help reshape society. Therefore, post-behavioralists placed great importance on actionable work.⁵⁷

During this period, various research interests and methodologies emerged in political science, including dependency theory, the study of authoritarian bureaucracy, structural reform, democratic transition, new Marxism, political economy, corporatism, state-society relations, new institutionalism, political processes, policy analysis, and political psychology.

This diversity in political science led some scholars, like Donald Moon, to assert that the branching and diversification of the discipline is a healthy phenomenon. Others, such as William Riker, called for reuniting research methodologies within political science on new foundations. Riker, for example, suggested that rational

choice theory could guide political science toward scientific progress.⁵⁸ However, Raymond Seidelman argued that contemporary political scientists had diverged in various directions during this phase. He noted that the central element in the efforts of the "new political science" (the post-behavioralists) to rebuild political science—namely, the reform of public affairs—had been neglected. Attempts to bridge the gap between intellectual issues and the political reform movement in political science became rare. Seidelman provides an example of this issue through political theory. Democracy, which emerged in the post-behavioral phase, has faced sharp criticism for being based on theoretical abstraction far removed from reality.⁵⁹

Thus, it becomes clear that although post-behavioralists (the "Conference for a New Political Science") launched a massive attack on "behaviorism" and its adherence to the status quo, calling for a more active political science dedicated to addressing social issues and resolving existing crises, they encountered fierce resistance within the field. If we return to the criteria for measuring the success of "scientific revolutions" as described by Thomas Kuhn, we conclude that the post-behavioral revolution in political science failed in the following ways:

- They were unable to redefine the research agenda in political science.
- The research agenda they proposed was not recognized by the academic community.
- Their opponents did not need to adopt a conciliatory approach but chose to ignore the proposals of the post-behavioralists ("Conference").⁶⁰

5. Perestroika in Political Science

Political science underwent significant transformations following the behavioral revolution, marked by the absence of scientific revolutions and the proliferation of research programs. The return of the concept of the "state" to the forefront of the research agenda drew attention to the fact that political science is governed by cycles of knowledge. For instance, the concept of the state was the focus of attention for an extended period before receding, only to resurface in later stages. However, the state returned this time in a new guise, no longer a sacred value as it was during the founding era of political science. The societal fragmentation brought about by behavioralists influenced the "new state theorists," who view the state as an independent variable, with state officials, according to their perspective, working to achieve their interests, rather than necessarily reflecting social forces. In this regard, they did not bring anything new, but merely refocused on specific actors and particular incentives for behavior (pursuing personal interests).

Almond notes that the "new statism" does not represent any revolution or paradigm shift but rather a new research agenda aimed at distinguishing between political systems in terms of the extent to which they influence how government employees formulate public policy.⁶¹ During the 1990s, it became increasingly difficult for American political scientists to ignore rational choice theory, although the origins of this new approach (or research program) had already emerged. Rational Choice Theory, which emerged in the 1950s, draws from economic theories to

explain politics. This theory assumes that every political actor (whether individual or group)⁶² seeks to maximize their gains, making it possible to understand and measure political behavior through the anticipated calculations and assumptions of the actors about the gains or losses a specific political situation will bring.⁶³

However, instead of revolutionizing political science, this theory remained within the expanding shadows of "behavioralism," "new statism," and other research approaches such as "cultural" and "new institutionalism," all of which were steadily increasing in number. Some pioneers of "rational choice" claimed that their approach represented a new development built upon the foundations of "behavioralism" (in its liberal democracy variant by Robert Dahl and David Easton's systems theory). However, behavioralists reject this claim, reaffirming their belief in "cumulative explanatory theory," meaning that the cognitive developments that followed the "behavioralist revolution" contribute to the "knowledge accumulation" that they laid the groundwork for.⁶⁴

At the beginning of the third millennium (2000), signs of a new model emerged, calling for reform in political science, often referred to as "Perestroika in Political Science." This movement strongly criticized rational choice theory, accusing it of excessively relying on scientific and mathematical methods while neglecting historical, economic, and social factors when studying political phenomena. It also criticized the focus on the quantitative aspects of political behavior and attitudes, while overlooking the qualitative dimensions.⁶⁵ The "Perestroikans" criticized the overwhelming preference for quantitative analysis, rational choice methods, and game theory in the leading journal of the American Political Science Association (APSA), questioning why all articles in the APSR used the same methodologies (statistics or game theory). They asked, "Where is political history, international history, political sociology, interpretive methodology, constructivism, area studies, and critical theory?"⁶⁶

Supporters of this movement presented seven proposals for a new political science, which included:⁶⁷

- Returning political philosophy to a central role in political studies.
- Integrating qualitative theoretical research methods into graduate programs.
- Reorganizing research to focus on studying real-world problems.
- Renewing attention to public policy studies.
- Revitalizing professional organizations and fields to emphasize political facts, particularly concerning methodologies and approaches, while ensuring full participation from women, racial minorities, foreign scholars, and faculty from liberal arts colleges to guarantee the universality of the field.
- Renewing the commitment to studying politics in various parts of the world and not limiting the focus to American politics.
- Encouraging interdisciplinary research with other knowledge fields.

This new movement is based on a synthesis of traditional and behavioral approaches. Its followers have become more accepting of the idea that facts and

values are interconnected. They also embrace the use of both qualitative data, which is associated with the traditional approach, and quantitative data, which is linked to the behavioral approach. Additionally, they are open to considering history and institutions alongside public opinion and rational choice theory. They no longer fear numbers and use correlation relationships, graphs, and ratios to express their views.

Conclusion:

The field of political science, throughout its evolutionary process, has witnessed numerous epistemological milestones, whether from a cumulative perspective following a continuous upward path or through epistemological breaks and scientific revolutions, as described by Thomas Kuhn. This perspective challenges the dominant view of science and knowledge development, which has been traditionally understood as a continuous, linear progression since the Age of Enlightenment.

Thus, the view held by some researchers that the development of the political science field consists solely of "knowledge revolutions" is not entirely accurate. Many of the developments within the field were driven not by "knowledge revolutions" but by "gradual or cumulative knowledge development." Advanced political studies today carry much of the research from previous eras. For example, comparative political studies—whether regarding the subject matter, methodology, the study of specific political systems, or the extraction of normative models—have existed since the Greek era, continuing through the Roman, Medieval, Renaissance, Enlightenment, and modern periods. Each era has seen political thinkers who produced comparative political studies, each with its unique features in terms of both fundamental knowledge and methodology. These ranged from normative and descriptive studies to empirical and analytical ones, among others.

It appears that political science, throughout its historical phases, has developed according to the principle of cumulative knowledge and continuity. Aristotle, for instance, employed the comparative method in his description of the constitutions and political systems of Greek cities. This approach was later followed by Machiavelli, who used comparative analysis in his study of Italian principalities, Montesquieu in his examination of political systems and the relationship between ethics and the environment, and Tocqueville through his comparative analysis between the United States and European nations.

Furthermore, the period following the behavioral revolution in political science led to the emergence of rational choice theory, which, instead of causing a revolution in the field, expanded under the shadow of behavioralism. Despite claims by proponents of rational choice that their approach represented a new development emerging from the collapse of "behavioralism," particularly in its liberal democratic variant as proposed by Robert Dahl and David Easton's systems theory, behavioralists rejected this argument. They reaffirmed their belief in "cumulative theory," meaning that the intellectual developments following the behavioral revolution contributed to a knowledge accumulation that they had established. Additionally, the decline of the "role of the state" from the early nineteenth century until the 1940s indirectly

contributed to the "shaping" of the theoretical approaches that characterized the "post-behavioral" period.

In terms of the development of the field of political science according to epistemological rupture and the occurrence of scientific revolution, which led to the shift of the prevailing epistemological model to a new guiding model in the field, it is evident that political science underwent five movements aimed at redefining its "state-centric" nature. These movements made a significant impact on political science, following Thomas Kuhn's concept of "scientific revolution." These movements include: statism, pluralism, behaviorism, the push for a new political science, and political science perestroika. Among these five movements, only the first and third were successful, as the field of political science displayed strong resistance to change. The success of "statism" and "behavioralism" can be attributed to the fact that their revolutions faced little to no resistance from within the field. The success of "statism" was due to its focus on professionalizing the study of political science, while the success of behavioralism stemmed from its undertaking of radical changes that involved an epistemological break with traditional methodologies. Behavioralism also redefined and reshaped the core components of the field, even going so far as to redefine political science itself, both in terms of methodology and subject matter, by introducing new units of political analysis.

Margins:

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⁵ Abdelkader Bechta, **Epistemology: The Example of Newtonian Philosophy of Physics**, Dar Al-Tali'a for Printing and Publishing, Beirut 1995, p. 10.

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⁷ Ibid, p. 12.

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¹² Muhammad Usman Amin Siddiqi, **Directional Relationship among Ontology, Epistemology, and Methodology in Social Science Research: An Illustration wi...**, Journal of Political Science, No. XXXVI, (November, 2018), PP. 3,4.

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- ²⁰ Ibid, p. 134.
- ²¹ Belkheddar Tifour, Op. Cit, p. 138.
- ²² Ibid, pp. 138, 139.
- ²³ Ibid, pp. 139, 140.
- ²⁴ Ibid, p. 140.
- ²⁵ Belkheddar Tifour, Op. Cit, p. 140.
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- ²⁷ Ibid, p. 141.
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- ²⁹ Ibid, p. 142.
- ³⁰ Ibid, pp. 143, 144.
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⁵⁵ John S. Dryzek, Op. Cit.

⁵⁶ Ibid.

⁵⁷ Mabrouk Sahli, Op. Cit, p.707.

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⁶⁵ Belkheddar Tayfour, Op. Cit., p. 11. For more, see: Mabrouk Sahli, Op. Cit, p. 710.

⁶⁶ Mabrouk Sahli, Op. Cit, p. 710.

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