

**THOMAS KUHN'S INCOMMENSURABILITY PRINCIPLE: IMPLICATION  
FOR ETHNIC DIVERSITY IN NIGERIA**

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**BENIN CITY.**

**OCTOBER, 2025**

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**AN ORIGINAL ESSAY SUBMITTED TO THE DEPARTMENT OF  
PHILOSOPHY, FACULTY OF ARTS, UNIVERSITY OF BENIN, BENIN CITY IN  
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF  
THE BACHELOR OF ART (B.A.) HONOURS DEGREE IN PHILOSOPHY,  
UNIVERSITY OF BENIN, BENIN CITY.**

**OCTOBER, 2025.**

**CERTIFICATION**

This is to certify that this project work titled: **THOMAS KUHN'S INCOMMENSURABILITY PRINCIPLE: IMPLICATION FOR ETHNIC DIVERSITY IN NIGERIA** was carried out by **EMEKA DAVID CHINYE** with Matriculation Number; **ART2101075** of the Department of Philosophy, Faculty of Arts, University of Benin, Benin City and it meets the requirements for the award of Bachelor of Arts in Philosophy.

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**PROF. SYLVESTER I. ODIA**  
**Project Supervisor**

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**Date**

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**DR W. T. OSEMWEGIE**  
**Ag. Head of Department**

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**Date**

## **DEDICATION**

This work is dedicated to Almighty God, my heavenly Father and eternal source of wisdom and understanding.

It is also benevolently dedicated to my parents, Mr. Mike Chinye and Mrs. Ngozi Chinye, also to my dear sister, Mrs. Esther A. Tokura and her loving husband, Mr. Samson B. Tokura, whose unwavering love, encouragement, and prayers have been a constant source of strength and inspiration throughout my academic journey.

## ACKNOWLEDGMENTS

I am deeply grateful to Almighty God for the gift of life, strength, and wisdom that sustained me throughout the course of this research. Without His grace, the successful completion of this work would not have been possible.

My sincere appreciation goes to my supervisor, Prof. Sylvester I. Odi whose intellectual guidance and patience were invaluable. His scholarly insight challenged me to refine my ideas and encouraged me to approach this project with rigor and commitment.

To the Head of Department, Dr. Wesley. T. Osemwegie, who has shown great and admirable leadership towards the department, and to all my lecturers, Prof. Peter Omonzejele, Prof. George U. Ukagba, Prof. Anthony A. Asekhauno, Prof. Felix Airoboman, Dr. Valentine Obiyan, Dr. Chistopher Osawaru, Dr. Paul Michael, Dr. Sylvester Apologun, Dr. Victor Jeko, and Dr. Joseph Odigie, Mr. Ibrahim Abdullahi, I am sincerely grateful for your provision of solid intellectual foundations through teachings and mentorships which has inspired me to pursue this research topic with passion.

To my dear sister, Mrs. Esther A. Tokura and her beloved husband, Mr. Samson B. Tokura, I remain indebted and grateful for their motivation, love and support. To my ever supportive brother, Michael Chinye and the entire family, I owe profound gratitude for their constant encouragement, and prayers. Their unwavering belief in me provided the motivation I needed during difficult moments of this academic journey.

I would also like to thank my colleagues and friends who offered encouragement, shared resources, and engaged me in fruitful discussions that enriched this study. Special mention goes to Victor Odusola, Pleasant Chukwuma, Peter Ojo, Idrisa Yohana, Sophia Emuemu, Blessing Amuzem, Praise Omoruyi and many others, who made the journey less daunting through companionship and shared experiences.

Finally, I extend appreciation to the authors and scholars whose works formed the backbone of this research. Their intellectual contributions provided the tools with which I have attempted to address the problem of ethnic diversity in Nigeria through the lens of Thomas Kuhn's philosophy.

To all, I remain indebted.

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## ABSTRACT

This study critically examines Thomas Kuhn's incommensurability principle and its implications for ethnic diversity and national integration in Nigeria. Kuhn's theory, developed in *The Structure of Scientific Revolutions* (1962), argues that scientific paradigms are often incommensurable, meaning that they operate within distinct conceptual frameworks that make mutual understanding and direct comparison difficult. This philosophical insight is applied here to Nigeria's context, where over 250 ethnic groups coexist with divergent worldviews, languages, and cultural traditions. The central problem addressed is Nigeria's enduring struggle with ethnic conflict and lack of cohesive national identity, despite decades of independence and numerous strategies for integration. The research employs a **comparative, hermeneutical, and dialectical philosophical method**. It is comparative in drawing analogies between scientific paradigms and ethnic worldviews; hermeneutical in interpreting Nigerian socio-political realities through the lens of Kuhn's philosophy; and dialectical in examining tensions between competing ethnic perspectives and national unity efforts. The study evaluates Nigeria's historical legacies of colonialism, civil war, and federal restructuring, showing how entrenched epistemic frameworks shape ethnic groups' perceptions of justice, governance, and morality. Case studies (including Shari'a law in the north, resource control in the Niger Delta, and farmer-herder conflicts in the Middle Belt) illustrate how incommensurability plays out in Nigeria's ethnic relations. Findings reveal that Nigeria's integration crisis is not simply a matter of political mismanagement or economic disparity but is rooted in epistemological divides that echo Kuhn's paradigm conflicts. The study recommends strategies of "epistemic translation" and cross-ethnic dialogue, emphasizing inclusivity, cultural respect, and shared narratives as pathways toward cohesion. Ultimately, the project demonstrates that Kuhn's incommensurability principle, while developed for the philosophy of science, provides a compelling framework for understanding and addressing Nigeria's persistent ethnic challenges.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

The evolution of scientific thought has consistently been a topic of intense scholarly interest, particularly within the field of the philosophy of science. Among the most influential figures in this discipline is Thomas Samuel Kuhn, whose groundbreaking text *The Structure of Scientific Revolutions* radically altered the way scholars perceive scientific progress. Rather than viewing science as a linear accumulation of facts, Kuhn argued that scientific knowledge evolves through a series of discontinuous shifts, which he famously termed “paradigm shifts.” These shifts represent wholesale changes in worldviews, rather than mere refinements of existing theories.

Kuhn’s concept of paradigms, a shared conceptual framework within which scientific inquiry operates, has since become a powerful analytical tool. His idea of incommensurability, or the notion that competing paradigms are so fundamentally different that they cannot be evaluated using a common standard, is particularly intriguing.

Introducing the concept of incommensurability, Kuhn in his work *The Structure of Scientific Revolutions*, argues that scientific paradigms, or overwhelming frameworks of understanding, are incommensurable when they lack a common measure for direct

comparison.<sup>1</sup> This principle suggests that adherents of different paradigms perceive and interpret the world through fundamentally different lenses, making effective communication and mutual comprehension challenging.

While originally applied to scientific communities, this concept bears remarkable relevance to social systems marked by diversity, particularly in terms of ideological, cultural, and ethnic worldviews. The epistemological insight extends beyond the realm of science to broader socio-cultural contexts, including ethnic relations. Nigeria is a nation that is characterized by vast ethnic diversity, which experiences persistent struggles in fostering national unity. The existence of over 250 ethnic groups in Nigeria, each with distinct languages, traditions, and worldviews, suggests the presence of epistemic incommensurability, which is akin to Kuhn's paradigm conflicts. Each ethnic group brings with it a unique history, language, cultural practice, and political aspiration. The three largest ethnic groups which are: the Hausa-Fulani in the north, the Yoruba in the southwest, and the Igbo in the southeast, have historically competed for dominance in political and economic spheres. This competition often manifests as ethnic tension, conflict, and mutual suspicion.

Attempts to forge national unity have met with mixed results. Various government-led initiatives, such as federal character principles, quota systems, and national integration programs, have only managed to produce a fragile and often contested sense of national

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<sup>1</sup> Kuhn, T. S. (1962). *The structure of scientific revolutions* (p. 147). Chicago: University of Chicago Press.

identity. What if the challenge lies not just in the failure of policy but in the fundamental incommensurability of the ethnic paradigms themselves? If so, then traditional political approaches may be inadequate, and a deeper philosophical re-evaluation becomes necessary.

Thus, understanding the implications of Kuhn's incommensurability principle in the context of Nigeria's ethnic diversity can offer new perspectives on national integration and cultural cohabitation, a new lens through which Nigeria's ethnic landscape can be examined. By conceptualizing ethnic ideologies as analogous to scientific paradigms, we can begin to understand why national consensus remains elusive. Each ethnic group may be operating within its own socio-cultural "paradigm," shaped by distinct historical experiences and value systems, which renders meaningful cross-ethnic dialogue and integration difficult without a revolutionary reconfiguration of national discourse.

While Kuhn's principle of incommensurability provides a compelling lens through which to examine ethnic diversity in Nigeria, it is not without its critics. Donald Davidson famously argued against radical incommensurability, contending that complete conceptual isolation between frameworks is implausible. He proposed the Principle of Charity, which holds that for communication to be possible, we must assume that others hold some beliefs that are true or at least intelligible within our framework.<sup>2</sup> This

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<sup>2</sup> Davidson, D. (1974). On the very idea of a conceptual scheme. *Proceedings and Addresses of the American Philosophical Association*, 47, pp. 5–20.

perspective challenges the notion that ethnic groups in Nigeria operating within entirely separate paradigms.

Similarly, Ian Hacking suggests that incommensurability is often overstated and that common experiential realities create opportunities for dialogue.<sup>3</sup> These critiques imply that while epistemic gaps exist, they may not be as rigid as Kuhn's principle suggests. Therefore, a critical question for this study is whether Nigerian ethnic groups experience total incommensurability or if their differences represent degrees of conceptual divergence rather than absolute separation.

## **1.2 Statement of the Problem**

Despite over six decades of independence and numerous strategies aimed at national integration, Nigeria continues to grapple with intense ethnic conflicts and a lack of cohesive national identity. The country's socio-political landscape has long been marred by ethnic tensions, conflicts, and a struggle for national cohesion. Nigeria's historical experience with colonialism, civil war, and ethno-religious violence underscores deep-rooted epistemic and ideological divides.<sup>4</sup> These differences manifest in governance, legal interpretations, social relations, and even perceptions of justice and morality, these conflicts are not merely the result of political mismanagement or economic disparities;

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<sup>3</sup> Hacking, I. (1983). *Representing and intervening: Introductory topics in the philosophy of natural science*. Cambridge: Cambridge University Press.

<sup>4</sup> Falola, T., & Heaton, M. M. (2008). *A history of Nigeria* (p. 198). Cambridge: Cambridge University Press.

they are also rooted in deeply entrenched ethnic ideologies that shape the perceptions, priorities, and policies of various groups.

Given that Kuhn's incommensurability principle highlights the difficulty of communication between differing epistemic frameworks, its application to Nigerian ethnic relations raises critical questions such as: Are ethnic groups in Nigeria operating within fundamentally different worldviews, making mutual understanding difficult? Can cross-ethnic dialogue bridge these epistemic divides? What role can philosophy play in mitigating conflicts arising from epistemic incommensurability? The challenge becomes more complex when we consider the epistemological frameworks from which these ethnic groups operate. Much like Kuhn's idea that scientists from different paradigms literally "see different things when looking at the same phenomenon," Nigeria's ethnic groups may interpret national issues through fundamentally different lenses. For instance, while a policy may be designed to promote equity, it might be perceived as favoritism or marginalization by another group.

This situation raises a critical question: Can a philosophical framework initially designed to explain scientific revolutions be employed to understand and potentially mediate ethnic conflict? Specifically, can Kuhn's theory of paradigm shifts and incommensurability help explain why efforts at national unity in Nigeria have been largely unsuccessful?

### **1.3 Purpose of the Study**

This study aims to critically examine the philosophical contributions of Thomas Kuhn, with a particular focus on his concepts of paradigm shifts and incommensurability, and to evaluate their relevance to ethnic diversity in Nigeria. The research seeks to draw a conceptual parallel between scientific revolutions and the ideological shifts necessary for national integration in multi-ethnic societies. Specifically, this research seeks to:

1. To provide a comprehensive account of Kuhn's philosophical contributions, especially as they relate to epistemology and scientific methodology.
2. To explore the nature and historical context of ethnic diversity in Nigeria.
3. To analyze the interface between incommensurable scientific paradigms and ethnic ideologies.
4. To investigate the potential application of Kuhn's framework to issues of national integration and policy formulation in Nigeria.

By addressing these objectives, this study aims to contribute to philosophical discussions on epistemology, African political philosophy, and conflict resolution.

### **1.4 Significance of the Study**

This study is significant for several reasons. Such:

1. It will extend Kuhn's philosophical theories beyond their traditional domain, thereby contributing to the growing field of interdisciplinary philosophy.

2. It will provide an understanding of the ethnic tensions in Nigeria, and how it can be resolved from a scientific point of view.
3. It will promote a deeper philosophical reflection on issues of national identity, unity, and governance.
4. Also from the angle of Political Philosophy and Governance, understanding epistemic incommensurability can inform policy recommendations for national integration and conflict resolution.

### **1.5 Scope of the study**

The scope of this research is limited to Nigeria's ethnic diversity and the epistemological implications of incommensurability. While Kuhn's principle applies to scientific paradigms, this study extrapolates it to socio-cultural paradigms, recognizing inherent methodological limitations.

Also the scope of this study covers a philosophical inquiry grounded in the works of Thomas Kuhn, with particular attention to *The Structure of Scientific Revolutions* and related literature. While acknowledging the importance of economic, historical, and political factors in shaping Nigeria's ethnic landscape, this research deliberately focuses on the epistemological dimension.

Furthermore, while the concept of incommensurability is interpreted metaphorically in this study, the use of scientific analogies in socio-political contexts has its limitations. Human societies, unlike scientific communities, are influenced by a wider array of

irrational, emotional, and psychological factors. Thus, the application of Kuhn's theory to ethnic diversity should be seen as heuristic rather than prescriptive.

## **1.6 Methodology**

The study employs research methodology, relying primarily on textual and conceptual analysis. Primary sources include Thomas Kuhn's major philosophical works, while secondary sources encompass scholarly literature in philosophy, sociology, and Nigerian studies. The method of hermeneutics will also be applied to interpret key texts and historical events.

In addition to analyzing textual content, the research adopts a comparative analytical approach to draw parallels between Kuhn's scientific paradigms and the ethnic structures of Nigeria. The goal is to provide an interpretive framework that elucidates how different groups construct meaning, identity, and legitimacy.

## **1.7 Definition of Related Terms**

For clarity, it is essential to define key terms to ensure accessibility across disciplines.

**Epistemic Incommensurability:** The idea that two or more knowledge systems are so fundamentally different that they cannot be directly compared or translated into one another's terms. *"Epistemic incommensurability refers to the inability to compare or translate theoretical terms and standards across rival paradigms."*<sup>5</sup> In this study, it refers

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<sup>5</sup> Stanford Encyclopedia of Philosophy. (n.d.). *Scientific revolutions*. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Fall 2018 Edition). Retrieved from <https://plato.stanford.edu/entries/scientific-revolutions>

to ethnic groups in Nigeria whose cultural and epistemic frameworks shape their worldviews in ways that hinder mutual understanding.

**Paradigm Conflicts:** In Kuhn's philosophy, a paradigm is a set of fundamental beliefs and methodologies within a scientific community. *"Paradigm debates are not really about relative merits... they are necessarily circular because each party uses its own paradigm to argue in that paradigm's defence."*<sup>6</sup> This study extends the term to describe the deep-seated conceptual and ideological differences between Nigeria's ethnic groups.

**Epistemic Bridges:** Conceptual or dialogical mechanisms that allow for partial translation or mutual understanding between different epistemic frameworks. Bridge principles are conceptual mechanisms that link differing epistemic states or domains, enabling transfer of information or rational agreement.<sup>7</sup> This term is particularly relevant when discussing whether Nigeria can foster interethnic dialogue to mitigate the effects of epistemic incommensurability.

**Incommensurability:** In Kuhnian philosophy, the idea that competing paradigms are so fundamentally different that they cannot be compared using a common metric. For Kuhn, "Theories are incommensurable if they involve different concepts and cannot be directly

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<sup>6</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., p. 94). Chicago: University of Chicago Press.

<sup>7</sup> Pacuit, E., & Roy, O. (2015). Epistemic foundations of game theory. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Fall 2015 Edition). Retrieved from <https://plato.stanford.edu/entries/epistemic-game>

compared.”<sup>8</sup> In this study, it refers to the conceptual and ideological distance between ethnic worldviews.

**Paradigm:** A set of practices, beliefs, and values that define a scientific community. Here, it is extended metaphorically to refer to ethnic ideologies or cultural frameworks.

**Ethnicity:** Ethnicity is a named human population with shared ancestry myths, histories and cultures, having an association with a specific territory and a sense of solidarity.<sup>9</sup> A social construct known as ethnicity separates individuals into smaller social groupings according to traits including common beliefs, language, history, heritage, and geographic origin.

**Ethnic Consciousness:** Ethnic consciousness refers to the awareness of belonging to a distinct ethnic group, often linked with political mobilization or identity assertion.<sup>10</sup> It is the acknowledging and claiming one's ethnic identity as a vital component of one's identity and social reality.

**National Integration:** National integration refers to the process of unifying diverse ethnic, cultural, and political groups within a single state structure to promote national

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<sup>8</sup> Kuhn, Op. Cit., p. 103.

<sup>9</sup> Smith, A. (1986). *The ethnic origins of nations* (p. 32). Oxford: Blackwell Publishers.

<sup>10</sup> Osaghae, E. E. (1994). *Ethnicity and its management in Africa: The democratization link*. Port Harcourt: Centre for Advanced Social Science (CASS).

identity and cohesion.<sup>11</sup> It is the process of using inclusive social, legal, and political institutions to balance ties between various groups.

### **1.8 Literature Review**

In his seminal work, *The Structure of Scientific Revolutions*, Kuhn argues that science advances not cumulatively but through "paradigm shifts", revolutionary transformations in the fundamental concepts and experimental practices of a scientific community.<sup>12</sup> His concept of incommensurability refers to the inability of competing paradigms to be measured by the same standard or to be fully translated into one another's terms.<sup>13</sup> This notion of cultural and religious divergence forms the philosophical bedrock for analyzing Nigeria's ethnic landscape, wherein distinct cultural communities operate within divergent worldviews and conceptual frameworks.

Existing literature on Kuhn's incommensurability principle largely focuses on scientific revolutions.<sup>14</sup> However, scholars such as Wiredu and Gyekye have explored its applicability in cross-cultural philosophical discourse where Wiredu highlights the differences in conceptual schemes between Western and African thought systems create barriers,<sup>15</sup> a notion closely aligned with Kuhn's thesis. Similarly, Gyekye critiques rigid

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<sup>11</sup> Ekeh, P. P. (1975). Colonialism and the two publics in Africa: A theoretical statement. *Comparative Studies in Society and History*, 17(1), 91–112. Cambridge: Cambridge University Press.

<sup>12</sup> Kuhn Op. Cit., Pp. 10–11

<sup>13</sup> Ibid, Pp. 148–150

<sup>14</sup> Popper, K. R. (2002). *The logic of scientific discovery* (p 45) London: Routledge.

<sup>15</sup> Wiredu, K. (1996). *Cultural universals and particulars: An African perspective* (p. 256). Bloomington: Indiana University Press.

interpretations of incommensurability, arguing for the possibility of conceptual mediation through intercultural dialogue.<sup>16</sup>

Karl Popper, in *The Logic of Scientific Discovery*, offers a critique of Kuhn's relativism, insisting instead on the objectivity of science through the principle of falsifiability.<sup>17</sup> Popper maintains that scientific knowledge progresses through critical testing and refutation, a process incompatible with Kuhn's sociologically-embedded paradigm shifts. This dichotomy illuminates a central concern of the current research: while Popper's rationalism promotes a universalist epistemology, it may overlook the culturally situated nature of ethnic knowledge systems in Nigeria.

Paul Feyerabend takes Kuhn's critique of methodological uniformity even further. In *Against Method*, he famously declares that "the only principle that does not inhibit progress is: anything goes".<sup>18</sup> His argument for epistemological anarchism validates the legitimacy of multiple, even contradictory, systems of thought. This theoretical lens is particularly relevant in pluralistic societies like Nigeria, where various ethnic groups construct and defend realities grounded in their unique linguistic, religious, and historical experiences.

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<sup>16</sup> Gyekye, K. (1997). *Tradition and modernity: Philosophical reflections on the African experience*. Oxford: Oxford University Press.

<sup>17</sup> Popper, Op. Cit., Pp. 18–20

<sup>18</sup> Feyerabend, P. (1993). *Against method* (p. 14). London: Verso Books.

Falola and Heaton (2008) have examined ethnic divisions, governance, and historical conflicts, but they do not explicitly frame these challenges in epistemic terms. For Eghosa Osaghae and Rotimi Suberu have explored the role of ethnic identity in political fragmentation, implicitly pointing to epistemic dissonance between groups. Their work suggests that conflicts in Nigeria are not merely political but also cultural and religious, as competing narratives of history, legitimacy, and governance shape intergroup relations.<sup>19 20</sup>

The intersection of incommensurability as proffered and ethnic diversity remains an underexplored area, necessitating further philosophical inquiry. F. A. Ogunmodede's *African Studies and Methodology: A Nigerian Perspective* provides a critical bridge between Western epistemological models and African realities. He argues for the recognition of African indigenous knowledge systems, not merely as subjects of anthropological curiosity, but as valid epistemological frameworks in their own right.<sup>21</sup> His work underscores the importance of methodological contextualization, a necessary step in applying Kuhn's Western-centric model to Nigeria's diverse cultural landscape.

On methodology, John W. Creswell's *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* is instrumental in shaping the research architecture of this

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<sup>19</sup> Osaghae, E. E. (1998). *Crippled giant: Nigeria since independence*. Bloomington: Indiana University Press.

<sup>20</sup> Suberu, R. (2001). *Federalism and ethnic conflict in Nigeria*. Washington, DC: United States Institute of Peace Press.

<sup>21</sup> Ogunmodede, F. A. (2005). *African studies and methodology: A Nigerian perspective* (pp. 65–67). Ibadan: Ibadan University Press.

study. Creswell emphasizes the need to select a methodology that aligns with the philosophical assumptions of the research. He advocates for qualitative approaches when studying complex social phenomena, a strategy well-suited for examining ethnic diversity and epistemic incommensurability in Nigeria.<sup>22</sup>

Johann Mouton's *How to Succeed in Your Master's and Doctoral Studies* complements Creswell's work by stressing the importance of conceptual clarity and intellectual rigor in research.<sup>23</sup> His discussion of problematization and theoretical framework development supports the interdisciplinary nature of this study, which draws from philosophy, political theory, and African studies.

African philosophers like Kwasi Wiredu and Paulin Hountondji have significantly contributed to debates on cultural pluralism. Wiredu, for instance, proposes a form of "consensual democracy" based on traditional African modes of deliberation, contrasting it with the adversarial politics of the West.<sup>24</sup> His work suggests that indigenous forms of knowledge and political reasoning might offer pathways toward resolving the epistemic conflicts that arise from Nigeria's ethnic fragmentation.

In summation, the reviewed literature presents a fertile ground for philosophical exploration. The juxtaposition of Kuhn provides a rich spectrum of perspectives on the

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<sup>22</sup> Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed., pp. 5–6). Thousand Oaks, CA: SAGE Publications.

<sup>23</sup> Mouton, J. (2001). *How to succeed in your master's and doctoral studies: A South African guide and resource book* (pp. 87–88). Pretoria: Van Schaik Publishers.

<sup>24</sup> Wiredu, Op. Cit., Pp 58–60.

nature of knowledge and its transmission. Meanwhile, the contributions of African scholars and methodologists ground these abstract theories within a tangible socio-cultural context. Yet, there remains a noticeable lacuna in the literature: a direct application of Kuhn's incommensurability principle to the socio-epistemic realities of Nigeria's ethnic pluralism. This study seeks to fill that critical gap.

## CHAPTER TWO

### THOMAS KUHN'S LIFE, WORKS AND INFLUENCE

#### 2.1 Biography of Thomas Kuhn

Thomas Samuel Kuhn who would later become a prominent figure in the philosophy of science was born on July 18, 1922, in Cincinnati, Ohio, into a family deeply involved in liberal and intellectual circles. His father, Samuel L. Kuhn, was an industrial engineer, while his mother, Minette Kuhn, was a well-educated editor and political activist.<sup>1</sup> Kuhn's early education exposed him to a wide array of political, social and philosophical debates which perhaps planted the seeds of his later intellectual curiosity and critical approach to dominant ideologies, and his natural aptitude for abstract thinking led him to pursue a degree in physics at Harvard University, from which he graduated summa cum laude in 1943.

As a student, Thomas Kuhn excelled in mathematics and physics, naturally leading him to major in physics, though he also had an affinity for literature and philosophy. His exposure to Kant's philosophy proved transformative, hinting at his future philosophical interests. Kuhn's involvement with the *Harvard Crimson* caught the attention of Harvard President James B. Conant, who later became a key influence in his career.<sup>2</sup> During World War II, Kuhn accelerated his studies to graduate early and contribute to the U.S. war effort by working in radar systems in both the United States and Europe. After the

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<sup>1</sup> Nickles, T. (2003). *Thomas Kuhn* (pp. 7–9). Reno: University of Nevada; Cambridge University Press.

<sup>2</sup> *Ibid*, Pp. 8–9

war, he returned to Harvard for graduate studies in physics, though his passion for philosophy still led him to take philosophy courses. Lacking a strong background in the field, he chose to complete his doctorate in solid-state physics under James Van Vleck in 1949. Nevertheless, it was Conant who played a pivotal role in redirecting Kuhn's path by inviting him to teach in a history of science course which was designed to cultivate scientific literacy and recruit future science policy leaders.<sup>3</sup>

While still at Harvard, Kuhn encountered the writings of Aristotle. In his teaching and explaining of Aristotle's physics to undergraduates and his attempt to understand Aristotelian physics, his academic trajectory pivoted, transitioning him from being a physicist to a historian and philosopher of science. Kuhn later recounted that the conceptual coherence of Aristotle's worldview, once properly understood, sparked his realization that "scientific revolutions are not about discarding falsehoods for truth, but about adopting entirely new worldviews."<sup>4</sup> This insight was foundational to his later theory of paradigms and scientific revolutions.

One of the most important turning points in Thomas Kuhn's academic journey, and in the public recognition of his philosophical work was a major international event which was the International Colloquium in the Philosophy of Science, held in July 1965 at Bedford College in London. At the time, Kuhn was still viewed primarily as a promising young

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<sup>3</sup> Fuller, S. (2000). *Thomas Kuhn: A philosophical history for our times* (pp. 25–27). Chicago: University of Chicago Press.

<sup>4</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., p. viii). Chicago: University of Chicago Press.

historian of science whose ideas, though bold, had only begun to ripple through the philosophical community. However, the impact of his book *The Structure of Scientific Revolutions* had already started generating serious discussions across disciplines.

The conference brought together many of the most influential figures in the philosophy and methodology of science: **Karl Popper**, the staunch defender of falsifiability and scientific realism; **Imre Lakatos**, known for his “research programs” approach; **Paul Feyerabend**, the radical pluralist; **Stephen Toulmin**, a philosopher of argumentation; and a host of **logical positivists**, including Kuhn’s soon-to-be colleague **Carl Hempel**.

What made the event so crucial was that it offered Kuhn a powerful stage to articulate his theory and defend it before a room full of the field’s most respected minds. The dialogue that ensued wasn’t just intellectual debate, it was a philosophical clash of paradigms in itself. While some attendees challenged Kuhn’s ideas, others found them compelling and worthy of deeper exploration. This back-and-forth revealed that Kuhn’s theory of paradigm shifts and incommensurability wasn’t just a historical curiosity, it was reshaping how people thought about science at its core.

Following the event, the major presentations, including critiques and responses to Kuhn’s ideas, were compiled and published in a landmark volume titled *Criticism and the Growth of Knowledge* (1970), edited by Imre Lakatos and Alan Musgrave. This book became a cornerstone in debates about scientific methodology, highlighting just how deeply Kuhn’s work had challenged traditional views and opened up a new space for

thinking about how knowledge evolves. Kuhn entered the colloquium as a respected historian; he left it as a central figure in the philosophy of science.<sup>5</sup>

As an intellectual, Kuhn taught at several prestigious institutions, including the University of California, Berkeley; Princeton University; and the Massachusetts Institute of Technology (MIT), where he taught in the Program in Science, Technology, and Society. His interdisciplinary approach, combining history, philosophy, and sociology of science, set him apart from many of his contemporaries. It was during this period that he formulated his revolutionary ideas about how science actually evolves, not as a steady accumulation of knowledge, but as a process of abrupt, discontinuous shifts in understanding. In 1962, he published *The Structure of Scientific Revolutions*, a book that would redefine the philosophy of science for decades to come. The book's impact was so substantial that it led to the widespread use of terms like "paradigm shift" both within and outside academia. Until his death in 1996, Kuhn remained an influential figure, known for challenging established views on the linearity and objectivity of scientific progress.

Throughout his life, Kuhn advocated for a more nuanced understanding of science as a dynamic and community-based process, rather than as a mechanical accumulation of facts. His personal and professional journey, from theoretical physics to historical and philosophical reflection, mirrored the very paradigm shifts he theorized. As he famously

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<sup>5</sup> Fuller Op. Cit., Pp. 143–145.

stated, “what scientists see depends on what they look at and also on what their previous visual-conceptual experience has taught them to see.”<sup>6</sup>

## **2.2 Influence of Thomas Kuhn**

Thomas Kuhn’s influence on contemporary thought is vast and multifaceted. *The Structure of Scientific Revolutions*, first published in 1962 and revised in 1970, is widely considered one of the most important works in the philosophy of science. In fact, Kuhn’s name has become virtually synonymous with the idea of the “paradigm shift”, which he used to describe a fundamental transformation in the assumptions, methods, and goals of a scientific community.

Before Kuhn, the dominant model of scientific growth was rooted in the logical positivism of the Vienna Circle and the falsificationist approach of Karl Popper. These frameworks emphasized linear progress, objectivity, and universal standards of rationality. Popper, in particular, insisted that scientific theories must be falsifiable, that is, it must be capable of being disproven through empirical testing.<sup>7</sup> Kuhn challenged this narrative by arguing that science, like language or culture, develops within specific conceptual frameworks that guide not only what is known but what can be known. For him, science does not evolve through steady, cumulative acquisition of knowledge, but through periodic, radical shifts in paradigms or comprehensive worldviews that define how

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<sup>6</sup> Lakatos, I., & Musgrave, A. (Eds.). (1970). *Criticism and the growth of knowledge*. Cambridge: Cambridge University Press.

<sup>7</sup> Popper, K. R. (1959). *The logic of scientific discovery* (pp. 40–43). London: Hutchinson.

scientific inquiry is conducted. In Kuhn's words, "normal science does not aim at novelties of fact or theory and, when successful, finds none".<sup>8</sup>

Kuhn's introduction of the concept of "normal science" was quite impactful. According to him, most scientific activity does not involve testing fundamental assumptions or challenging the existing paradigm. Instead, scientists work within a paradigm until enough anomalies or observations it cannot explain, accumulate to provoke a crisis. This crisis may eventually lead to a scientific revolution, whereby the old paradigm is replaced by a new, incommensurable one.

The implications of this theory extend far beyond the history of science, becoming one of the most recognizable and widely used concepts outside philosophy. In disciplines such as political science, sociology, anthropology, and education, Kuhn's model has been applied to understand ideological shifts, cultural revolutions, and epistemological diversity. In many ways, Kuhn introduced relativism into the philosophy of science, suggesting that truth is not absolute or universal, but rather internal to the prevailing paradigm. While he did not deny the existence of scientific reality, he emphasized that access to that reality is always mediated by the tools, concepts, and assumptions of the scientific community. Kuhn's work offered a language for understanding discontinuous change, not just in science but in culture and politics as well. As Steve Fuller notes,

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<sup>8</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., p. 52). Chicago: University of Chicago Press.

“Kuhn’s influence can be measured by how deeply the idea of the ‘paradigm shift’ has entered public and academic consciousness.”<sup>9</sup>

Furthermore, Kuhn’s insights paved the way for constructivist and relativist approaches in the sociology of science. His notion that scientific facts are theory-laden and paradigm-dependent challenged the notion of an observer-independent scientific reality. This departure from positivism led some critics to accuse him of relativism, a claim Kuhn himself denied. He clarified in the Postscript to the second edition of *Structure* that while paradigms are not universally commensurable, this does not mean they are arbitrary or immune to rational evaluation.<sup>10</sup>

Kuhn’s theory also contributed to what is now called the “historicist turn” in the philosophy of science, emphasizing the importance of historical context in understanding scientific development. This approach resonated with scholars in African, feminist, and postcolonial philosophy. The idea that different societies operate within unique epistemic frameworks lends itself naturally to discussions about indigenous ethnic systems and their individual uniqueness, which cannot be taken for another within Nigeria nor across Africa, let alone compared with a non-African paradigm. For instance, African epistemologists such as Kwasi Wiredu have argued that traditional African thought systems are complete and coherent in their own right, and should not be judged by

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<sup>9</sup> Fuller, S. (2000). *Thomas Kuhn: A philosophical history for our times* (p. 21). Chicago: University of Chicago Press.

<sup>10</sup> Kuhn Op. Cit., Pp. 198–202.

Western standards.<sup>11</sup> Kuhn's work provides theoretical justification for this position, challenging the hegemony of Western scientific rationalism.

Perhaps most importantly, Kuhn reconceptualized the scientist, not as a dispassionate logic machine but as a human actor embedded in a community with shared assumptions and traditions. He argued that science progresses not merely through logic and data, but through complex social processes, including persuasion, aesthetics, and even professional identity. As he wrote, "The transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced."<sup>12</sup>

Moreover, Kuhn's model of scientific development, marked by resistance to change, the sociological entrenchment of paradigms, and the non-linear path of progress, has become a metaphor for change in all areas of human inquiry. The very idea of a "paradigm shift" has become common parlance, used to describe transformations in business, technology, art, and political ideology.

Critics of Kuhn, such as Imre Lakatos and Paul Feyerabend, have pushed back against his perceived relativism. Feyerabend, in particular, celebrated Kuhn's challenge to scientific orthodoxy but argued for an even more anarchic view: "anything goes."<sup>13</sup> Nonetheless, even these critiques acknowledge Kuhn's immense contribution to shifting the focus of

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<sup>11</sup> Wiredu, K. (1996). *Cultural universals and particulars: An African perspective* (pp. 58–62). Bloomington: Indiana University Press.

<sup>12</sup> Kuhn Op. Cit., Pp. 151

<sup>13</sup> Feyerabend, P. (1975). *Against method* (p. 14). London: Verso.

the philosophy of science from abstract formalism to the historical and cultural context in which science occurs.

Kuhn's influence represents a significant epistemological turn: a move away from universalism and toward contextualism, from certainty to complexity. His insights resonate with the challenges of multi-ethnic societies like Nigeria, where diverse groups often inhabit different epistemic and cultural paradigms. Just as Kuhn's scientists operate within incommensurable frameworks, Nigeria's ethnic groups may likewise struggle to understand or reconcile their differences without shared cognitive or cultural tools.

### **2.3 The Works of Thomas Kuhn**

Thomas S. Kuhn's body of work forms one of the most profound reorientations in the modern philosophy of science. Although Kuhn's reputation is most widely associated with his 1962 masterpiece *The Structure of Scientific Revolutions*, his broader corpus offers valuable insight into the evolution of scientific thought and the complexity of epistemological frameworks. His intellectual journey from being an historian of astronomy to one of the most influential philosophers of science, reveals a consistent preoccupation with how scientific knowledge is formed, legitimated, and challenged across historical periods. Each of Kuhn's major works which range from historical studies of Copernican astronomy to essays on the nature of scientific tradition, provides a layer of depth to the central concepts that he would later unify in his famous work, *The Structure of Scientific Revolutions*.

Kuhn's first book, which he titled, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (1957), set the groundwork for his later theoretical innovations. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* was a historical analysis of the transformation from Ptolemaic to Copernican astronomy. In this work, Kuhn documented the eventual displacement of the geocentric Ptolemaic model by the heliocentric Copernican system, he traces how the heliocentric model, although scientifically accurate, took nearly a century to gain widespread acceptance and it was not because the heliocentric model was more “true” in the abstract, but because it conflicted with the dominant philosophical and theological paradigms of the time, in essence it was not merely a triumph of empirical accuracy, but a shift that necessitated the reconfiguration of enduring assumptions of the scientific community.

Kuhn writes that the Copernican model was "incompatible with traditional conceptions of physical motion" and faced deep resistance because it contradicted religious doctrine and long-standing Aristotelian physics.<sup>14</sup> Kuhn's detailed documentation of resistance to Copernicus prefigures many of the themes that would become central to *The Structure of Scientific Revolutions*, one of which is the idea that evidence alone is not enough to provoke change within scientific communities. For Kuhn, social context, institutional

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<sup>14</sup> Kuhn, T. S. (1957). *The Copernican revolution: Planetary astronomy in the development of Western thought* (p. 35). Cambridge, MA: Harvard University Press.

power, and entrenched belief systems all play crucial roles in the adoption or rejection of new knowledge.<sup>15</sup>

It was in *The Structure of Scientific Revolutions*, however, that Kuhn systematized his philosophical ideas. The book, first published as part of the International Encyclopedia of Unified Science, became a phenomenon. In it, Kuhn introduced concepts such as **normal science**, **paradigm**, **crisis**, **anomaly**, and **scientific revolution**, transforming how science is philosophically understood. According to Kuhn, a **paradigm** is not merely a theory but an entire worldview that includes laws, theoretical assumptions, instrumentation, values, and problem-solving strategies.<sup>16</sup> Paradigms guide what scientists observe, what questions they ask, what methods they use, and what answers they accept.

During periods of **normal science**, scientists operate under the assumptions of an accepted paradigm, engaging in what Kuhn calls “puzzle-solving” which are activities that assume the paradigm is correct. For Kuhn, "puzzle-solving" is the practice of refining theories without challenging the foundational framework, so problems are defined in a way that fits the already existing framework. However, when anomalies which are observations or experimental results that the paradigm cannot explain are compiled, scientists may plunge into a period of crisis. This phase does not automatically lead to change; rather, there may be resistance, reinterpretation of evidence, or outright denial

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<sup>15</sup> Ibid, Pp 32–35.

<sup>16</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., pp. 10–11). Chicago: University of Chicago Press.

and often times emotional and aesthetic judgments are involved. It is only when a sufficient number of practitioners accept a radically different approach that a **scientific revolution** occurs, replacing the old paradigm with a new one.<sup>17</sup>

The second edition of *The Structure of Scientific Revolutions* (1970) included a crucial Postscript, where Kuhn addressed many widespread misinterpretations of his work, responded to critics and clarified his notion of paradigms. He introduced the term “disciplinary matrix” to clarify what he meant by “paradigm,” defining it as the shared commitments, values, and exemplars or models held by members of a scientific community.<sup>18</sup> In this Postscript Kuhn further refined and elaborated on his idea of **incommensurability**, which had been widely misunderstood. He emphasized that incommensurability does not imply total incomparability, but rather that concepts and standards of evaluation differ to such an extent that full translation between paradigms is impossible.<sup>19</sup> This clarification was essential in responding to critics like Karl Popper, who accused Kuhn of promoting epistemic relativism.

Kuhn’s later essays, such as those compiled in *The Essential Tension* (1977), delve into the dynamics and interplay between innovation and tradition in scientific practice. Here, Kuhn argues that progress in science depends on a delicate balance: tradition ensures

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<sup>17</sup> Ibid, Pp 66-77.

<sup>18</sup> Ibid, Pp 181–86.

<sup>19</sup> Ibid, Pp 198–202.

coherence and methodological continuity, while innovation disrupts established norms to produce new insights.<sup>20</sup> So for him, he argues that while science must innovate, it also requires a stable structure to make sense of progress. This tension mirrors the struggle in multicultural societies like Nigeria, where the need to maintain traditional ethnic identities must be balanced against national integration and modernization.

Another important, though less popular, work of Kuhn is his *Black-Body Theory and the Quantum Discontinuity, 1894–1912* (1978), which offers a case study of paradigm change to the development of quantum mechanics in physics. This historical case study illustrates how Planck’s introduction of energy quanta, initially seen as a mathematical convenience, triggered a paradigm shift that ultimately redefined the physical sciences. Here, Kuhn illustrates how even seemingly minor theoretical inconsistencies can grow into full-blown crises that redefine an entire scientific field. For him, conceptual crises in science often arise not from a direct failure of a theory but from the theoretical recontextualization of existing anomalies.<sup>21</sup> The historical specificity of this work reinforces Kuhn’s central claim: that scientific change is not only logical or empirical but also cultural and interpretative.

Collectively, Kuhn’s works form a cohesive philosophical system. They show that scientific knowledge is historically contingent, contextually bounded, and community-

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<sup>20</sup> Kuhn, T. S. (1977). *The essential tension: Selected studies in scientific tradition and change* (p. 225). Chicago: University of Chicago Press.

<sup>21</sup> Kuhn, T. S. (1978). *Black-body theory and the quantum discontinuity, 1894–1912* (pp. 129–132). Oxford: Oxford University Press.

defined. This stands in stark contrast to Enlightenment models of rationality that posit a universal, objective trajectory of knowledge. For Kuhn, perception and cognition are shaped by shared exemplars, and transitions between paradigms involve changes in both worldview and language.

This insight has implications beyond science. In culturally plural societies like Nigeria, divergent worldviews often generate ethnic incommensurability similar to Kuhn's scientific paradigms. Just as scientific communities interpret the same data through different lenses, ethnic communities may perceive political institutions, legal systems, and moral values through frameworks shaped by distinct traditions. Kuhn's work, therefore, offers a model for understanding the deep-rooted cognitive and cultural pluralism that strengthens ethnic diversity, and for addressing it not through forced assimilation, but through cross-paradigmatic dialogue and epistemic translation.

#### **2.4 Thomas Kuhn's Incommensurability Principle**

Among Thomas Kuhn's contributions to the philosophy of science, the concept of **incommensurability** is arguably the most debated and influential. Introduced in the first edition of *The Structure of Scientific Revolutions* (1962) and expanded in the Postscript to the second edition (1970), incommensurability refers to the idea that successive scientific

paradigms are so fundamentally different in terms of assumptions, standards, and language that there is no neutral framework by which to directly compare them.<sup>22</sup>

In his own words, Kuhn explains, “In a sense that I am unable to explicate further, the proponents of competing paradigms practice their trades in different worlds.”<sup>23</sup> The phrase encapsulates the theoretical rupture that occurs when a scientific community moves from one paradigm to another, emphasizing that these proponents do not merely disagree on theories, but operate with different conceptual lenses. This is not simply a matter of replacing one theory with a better one. Rather, the concepts themselves (what is observed, what is meaningful, what counts as evidence) are redefined. For Kuhn, paradigm shifts, are not just theoretical innovations but steady transformations that alter what scientists consider to be legitimate problems, solutions, and even data. This stands in direct opposition to earlier models of science, such as Karl Popper’s falsifiability principle, which presupposed that all theories could be judged by universal criteria.<sup>24</sup> As a result of this shift, communication between proponents of different paradigms becomes deeply problematic, even though they may use similar terminology.

For instance, Kuhn pointed out the transition from Newtonian mechanics to Einsteinian relativity. Although both paradigms address motion, gravity, and mass, the meanings of these terms change significantly. Under Newtonian mechanics, time and space are

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<sup>22</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., pp. 198–202). Chicago: University of Chicago Press.

<sup>23</sup> *Ibid*, Pp 150.

<sup>24</sup> Popper, K. R. (1959). *The logic of scientific discovery* (pp. 40–43). London: Hutchinson.

absolute whereas under Einsteinian relativity, they are interdependent and relative to the observer's frame of reference. Although the vocabulary remained, the conceptual frameworks had become incommensurable. As Kuhn explains, "Einstein's theory... demands a reinterpretation of such basic concepts as mass and time, concepts that were thought to be both self-evident and immutable in Newton's framework"<sup>25</sup> Because the foundational terms have changed, so too has the world in which scientists operate.

Kuhn illustrates his concept of incommensurability using the famous *duck-rabbit* image, which uses a Gestalt switch, where the same drawing of the image can be seen either as a duck or a rabbit, but not both simultaneously. For Kuhn he likens scientific revolutions to this kind of perceptual conversion: once the viewer's perception shifts, it is difficult to return to the original view.<sup>26</sup> So, the implication is profound. Understanding is not just about facts or logic, but about the perceptual and conceptual framework within which those facts gain meaning.

In the Postscript to the 1970 edition of *The Structure of Scientific Revolutions*, Kuhn clarified that incommensurability does not mean complete unintelligibility. Paradigms are not separate languages with no points of contact, but they do lack a full one-to-one correspondence. He writes, "Translation may preserve referential identity while failing to

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<sup>25</sup> Kuhn Op. Cit., Pp. 101–105.

<sup>26</sup> Ibid, Pp 111–12.

preserve meaning”<sup>27</sup> In other words, even when two paradigms use the same terms, such as “atom” or “energy”, they may not mean the same thing or fulfill the same explanatory function within different systems.

In the broader sense, incommensurability challenges the notion of objective truth and rational comparison. If paradigms define their own criteria for validity, then the rational evaluation of one paradigm over another now becomes a question of internal coherence, not universal standards. Critics like Popper and Lakatos found this position troubling, as they accuse Kuhn of promoting relativism or even irrationalism. However, Kuhn maintained that his intention was not to undermine science but to depict its actual practice as revealed through historical study.

The principle of incommensurability also has extended implications beyond science, particularly in multicultural and multi-ethnic societies where different ethnic groups may operate within their own cognitive and cultural paradigms. These paradigms include unique ways of understanding the world, processing knowledge, and validating truth. When such frameworks are incommensurable, efforts at national unity or policy consensus face intrinsic barriers. Communication becomes strained, mutual understanding falters, and conflict becomes more likely.

In Nigeria, where over 250 ethnic groups coexist, Kuhn’s incommensurability principle offers a compelling lens through which to interpret persistent ethnic tensions. Groups like

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<sup>27</sup> Ibid, p 201.

the Yoruba, Igbo, and Hausa-Fulani possess not only distinct languages and traditions but also divergent worldviews grounded in history, religion, and social structure. These worldviews influence everything from moral reasoning and legal interpretation to economic behavior and political allegiance.

For example, while the Hausa-Fulani worldview tends to emphasize hierarchical structure and theocratic governance, rooted in Islamic jurisprudence, the Igbo worldview historically centers on communal consensus and autonomous republicanism.<sup>28</sup> Meanwhile, the Yoruba social structure combines traditional monarchy with pluralistic civic institutions. These divergent cultural frameworks result in different interpretations of authority, justice, and national identity.

Kuhn's insight into paradigm-based perception explains why these groups often find it difficult to engage in meaningful political dialogue. A policy that appears rational or just to one group may appear alien or oppressive to another. In effect, they are operating from incommensurable socio-political paradigms. This epistemic dissonance is evident in recurrent ethnic tensions, calls for secession, disagreements over federal structure, and competing historical narratives.

Moreover, the frequent breakdown of national integration efforts in Nigeria can be attributed, in part, to this incommensurability. Just as Kuhn's scientists are unable to evaluate each other's work by the same standards, Nigerian ethnic groups often judge

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<sup>28</sup> Ekeh, P. P. (1975). *Colonialism and the two publics in Africa: A theoretical statement*. Ibadan: Nigerian Institute of Social and Economic Research.

national policies through the lens of their distinct historical experiences and cultural assumptions. The failure to recognize and translate these differences has led to a persistent crisis of legitimacy and trust.

However, Kuhn does not present incommensurability as an insurmountable barrier. Instead, he offers a model for engaging across paradigms: one that involves deliberate translation, interpretation, and ethnic empathy. In multicultural societies like Nigeria, this approach suggests that unity cannot be built on imposed uniformity. Instead, it requires the construction of shared spaces of meaning where different ethnic communities can understand and critique each other's frameworks without erasing their distinctiveness.

This has practical implications for governance, education, and conflict resolution in Nigeria. Policymakers must recognize that appeals to national values or scientific rationality will not succeed unless they are grounded in cross-paradigm translation. Ethnic pluralism must be treated not merely as a sociological reality but as an epistemological condition, a matter of how people *know* the world, not just how they *live* in it.

Kuhn's principle of incommensurability, far from being an abstract theory limited to the laboratory, provides a philosophical framework for navigating cultural and political diversity. In Nigeria's case, it urges scholars, leaders, and citizens to move beyond assumptions of universal rationality and embrace the complexity of coexisting paradigms.

Incommensurability, when properly understood, is not a dead-end but an invitation to dialogue, grounded in humility and mutual recognition.

## CHAPTER THREE

### ETHNIC DIVERSITY AND INCOMMENSURABILITY IN NIGERIA

#### 3.1 Examination of Kuhn's Philosophical Work

Thomas Samuel Kuhn's contributions to the philosophy of science constitute one of the most significant reorientations of the twentieth century in how scholars, scientists, and even the general public understand scientific progress. His work not only challenged entrenched positivist and falsificationist accounts of scientific development but also introduced a vocabulary and conceptual framework that has shaped debates across the humanities and social sciences. Central to Kuhn's philosophical project was his insistence that the growth of scientific knowledge cannot be fully captured by linear or cumulative models; rather, it is a historically contingent process, deeply embedded in the norms, practices, and conceptual commitments of scientific communities.<sup>1</sup>

Kuhn's philosophy was grounded in a rich interdisciplinary background. Trained initially as a physicist, Kuhn brought to his philosophical reflections an intimate knowledge of the technical details of science, coupled with a historian's sensitivity to the complexities of intellectual change. His early work, particularly *The Copernican Revolution* (1957), illustrated how major shifts in scientific understanding involve more than empirical discovery, they require wholesale reconfigurations of worldviews, conceptual schemes,

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<sup>1</sup> Fuller, S. (2000). *Thomas Kuhn: A philosophical history for our times* (pp. 14–16). Chicago: University of Chicago Press.

and even linguistic frameworks.<sup>2</sup> This historical sensibility became the foundation for his later philosophical breakthroughs, which moved the philosophy of science away from abstract logical reconstructions toward historically informed accounts of actual scientific practice.

The hallmark of Kuhn's philosophical work is his 1962 book *The Structure of Scientific Revolutions*, a text that catalyzed what has been described as the "historicist turn" in the philosophy of science.<sup>3</sup> In this book, Kuhn introduced a set of interrelated concepts such as: "paradigm," "normal science," "anomaly," "crisis," "scientific revolution," and "incommensurability", which collectively offered a new model of scientific development. According to Kuhn, science advances through alternating periods of stability and disruption: during periods of "normal science," researchers work within a shared paradigm, solving puzzles and refining theories without challenging the underlying conceptual framework; during revolutionary periods, that framework itself is called into question and eventually replaced by a new one that is, in key respects, incommensurable with the old.<sup>4</sup>

This rejection of cumulative, steady progress as the dominant mode of scientific change set Kuhn apart from both logical positivists and Popperians. Logical positivists, such as

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<sup>2</sup> Kuhn, T. S. (1957). *The Copernican revolution: Planetary astronomy in the development of Western thought* (pp. 32–35). Cambridge, MA: Harvard University Press.

<sup>3</sup> Marcum, J. A. (2005). *Thomas Kuhn's revolution: An historical philosophy of science* (pp. 2–5). London: Continuum.

<sup>4</sup> Kuhn, T. S. (2012). *The structure of scientific revolutions* (50th anniversary ed., pp. 10–12, 66–71). Chicago, IL: University of Chicago Press.

Rudolf Carnap, emphasized the unity of science and the idea that all scientific knowledge could be reduced to a common observational language.<sup>5</sup> Karl Popper, while critical of positivism, retained the idea that science progresses by means of objective methodological rules specifically, the falsification of hypotheses.<sup>6</sup> Kuhn, by contrast, argued that such models failed to account for the actual historical record, in which the acceptance of a new theory often depended as much on persuasive rhetoric, shifts in professional identity, and aesthetic criteria as on empirical adequacy.<sup>7</sup>

Another distinguishing feature of Kuhn's philosophical work is its challenge to the notion of a purely objective and universal rationality in science. He did not deny the reality of the natural world or the importance of empirical evidence, but he argued that all observation is "theory-laden", that is, observations are shaped by the assumptions, categories, and exemplars of the prevailing paradigm.<sup>8</sup> This meant that what counted as a legitimate problem, method, or solution varied across historical contexts and was not determined by universal rules. Kuhn's concept of incommensurability, developed most explicitly in the postscript to the second edition of *The Structure of Scientific Revolutions*, underscored this point: different paradigms may employ the same words but mean

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<sup>5</sup> Carnap, R. (1934). *The unity of science* (pp. 3–5). London: Kegan Paul.

<sup>6</sup> Popper, K. R. (2002). *The logic of scientific discovery* (pp. 40–43). London: Routledge.

<sup>7</sup> Kuhn, T. S. (2012). *Op. Cit.*, Pp. 151–154.

<sup>8</sup> *Ibid.*, Pp. 111–112.

fundamentally different things by them, making direct comparison and adjudication difficult.<sup>9</sup>

The influence of Kuhn's philosophical framework extended far beyond the philosophy of science. In sociology, his ideas informed the sociology of scientific knowledge, particularly in the work of scholars like Barry Barnes and David Bloor, who took Kuhn's emphasis on community norms as a basis for studying science as a social institution.<sup>10</sup> In anthropology, the concept of paradigm shifts has been used to explain cultural transformations, while in political science, it has served as a model for understanding shifts in governance, ideology, and national identity. In the Nigerian context, Kuhn's work provides a valuable analytical tool for interpreting the challenges of ethnic diversity and national integration. Just as scientific paradigms are shaped by historically specific frameworks, so too are the political and cultural paradigms of Nigeria's many ethnic groups, each with its own assumptions, values, and methods of legitimating authority.

In examining Kuhn's philosophical work, two aspects warrant close attention: first, the detailed exposition of his ideas as presented in *The Structure of Scientific Revolutions*; and second, the philosophical implications of his concept of scientific revolution, including its broader relevance to the study of socio-political phenomena such as ethnic diversity in Nigeria. Together, these discussions form the theoretical foundation for understanding how Kuhn's incommensurability principle can be applied beyond the

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<sup>9</sup> Ibid., 198–202.

<sup>10</sup> Barnes, B. (1974). *Scientific knowledge and sociological theory* (pp. 32–35). London: Routledge.

natural sciences, offering a lens through which to view the epistemic and cultural pluralism that characterizes complex, multi-ethnic societies.

### **3.1.1 The Structure of Scientific Revolution**

Thomas S. Kuhn's *The Structure of Scientific Revolutions* (1962; revised 1970) is widely regarded as one of the most transformative works in the philosophy of science. Originally commissioned as part of the *International Encyclopedia of Unified Science*, the text was expected to be a concise historical case study on the development of science. However, its publication marked a major intellectual shift in the understanding of scientific progress, to the point where it became one of the most cited academic books of the twentieth century.<sup>11</sup> The *Times Literary Supplement* would later list it among the most influential academic works of all time, acknowledging its profound impact not only on the philosophy of science but also across the humanities and social sciences.<sup>12</sup>

Before Kuhn's intervention, the prevailing view of science was largely shaped by two influential traditions: the logical positivism of the Vienna Circle and Karl Popper's falsificationism. Logical positivists viewed scientific knowledge as a steady, cumulative accumulation of verified facts derived from observation and logic. Popper, while rejecting verificationism, proposed that science advances through bold conjectures that

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<sup>11</sup> Kuhn, T. S. (2012). *The structure of scientific revolutions* (50th Anniversary ed., p. ix). Chicago: University of Chicago Press.

<sup>12</sup> The Times Literary Supplement. (1995, October 6). The hundred most influential books since the war. *The Times Literary Supplement*, special issue, p. 39.

must be subjected to rigorous empirical tests capable of falsifying them.<sup>13</sup> Kuhn found both models historically inadequate. Drawing on his background as both a physicist and historian of science, he argued that the actual history of scientific practice reveals a pattern not of linear progression but of extended periods of conceptual stability, what he called “normal science”, interrupted by revolutionary transformations that fundamentally alter the frameworks through which scientists interpret the world.<sup>14</sup>

Central to Kuhn’s thesis is the concept of the “paradigm”, a term he used in a richer sense than simply a scientific theory. For Kuhn, a paradigm refers to an entire constellation of shared beliefs, values, techniques, exemplars, and methodological commitments that define legitimate research within a scientific community.<sup>15</sup> It sets the boundaries of acceptable questions, determines the appropriate methods for answering them, and shapes the interpretation of results. Once a paradigm becomes established, scientists engage in what Kuhn terms normal science, a process of “puzzle-solving” in which research is directed towards extending the paradigm’s reach and precision, rather than questioning its basic assumptions.<sup>16</sup> This activity, Kuhn argues, is conservative by nature, scientists work

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<sup>13</sup> Popper, K. R. (2002). *The logic of scientific discovery* (pp. 40–43). London: Routledge.

<sup>14</sup> Fuller, S. (2000). *Thomas Kuhn: A philosophical history for our times* (pp. 17–20). Chicago: University of Chicago Press.

<sup>15</sup> Kuhn, T. S. (2012). *Op. Cit.*, Pp. 10–11.

<sup>16</sup> *Ibid.* Pp. 35–37.

to make the natural world fit the conceptual structures of the paradigm, often resisting interpretations that would call its core principles into doubt.<sup>17</sup>

However, over time, persistent anomalies which are observations or results that cannot be explained within the existing paradigm, begin to accumulate. Initially, such anomalies are typically dismissed as experimental errors or reconciled through adjustments to the existing framework. Yet, when they grow too numerous or significant to be ignored, the community may enter a state of **crisis**.<sup>18</sup> It is during such crises that alternative paradigms may emerge, offering new frameworks capable of resolving the anomalies and reorienting the field. The adoption of such a framework constitutes a scientific revolution: a non-cumulative, transformative shift in the worldview of the scientific community.<sup>19</sup>

One of the most controversial aspects of Kuhn's theory is his notion of incommensurability, the idea that successive paradigms are so different in their concepts, methods, and standards that there is no neutral, theory-independent standpoint from which to compare them directly.<sup>20</sup> Kuhn's point is that when paradigms change, even the meanings of key scientific terms may shift. For example, Newtonian mechanics and Einstein's theory of relativity both use terms like "mass" and "time," but the concepts these terms refer to are fundamentally different in each framework.<sup>21</sup> In this sense,

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<sup>17</sup> *Ibid.*, p. 24.

<sup>18</sup> *Ibid.*, Pp. 66–71

<sup>19</sup> *Ibid.*, Pp. 92–94.

<sup>20</sup> *Ibid.*, Pp. 198–202.

<sup>21</sup> *Ibid.*, Pp. 101–105.

paradigm shifts are akin to a Gestalt switch: the same world is viewed through an entirely new lens, making it difficult to revert to the old way of seeing.<sup>22</sup>

Kuhn illustrates his arguments through a range of historical case studies. The **Copernican Revolution**, for instance, replaced the geocentric model of the cosmos with the heliocentric model, but this shift was not simply the triumph of a more accurate theory over a less accurate one. It also required a deep reconfiguration of philosophical, theological, and physical assumptions that had underpinned European thought for centuries.<sup>23</sup> Similarly, the Chemical Revolution led by Antoine Lavoisier displaced the phlogiston theory of combustion not through a single decisive experiment, but because it offered a more coherent explanatory framework for a range of chemical phenomena, even while redefining key concepts such as “element.”<sup>24</sup> The shift from Newtonian physics to Einsteinian relativity similarly redefined the fundamental concepts of space, time, and motion, making direct comparison with the older paradigm problematic.<sup>25</sup>

The revolutionary nature of Kuhn’s book lay not only in its content but also in its implications. It challenged the entrenched belief that science is an objective, purely rational enterprise steadily approaching an ultimate truth. Instead, Kuhn revealed science as a human activity, embedded within historical contexts, shaped by communal norms,

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<sup>22</sup> *Ibid.*, Pp. 111–112.

<sup>23</sup> Kuhn, T. S. (1957). *The Copernican revolution* (pp. 32–35). Cambridge, MA: Harvard University Press.

<sup>24</sup> Kuhn T. S. (2012)., *Op. Cit.*, Pp. 131–133.

<sup>25</sup> *Ibid.*, Pp. 102–105.

and influenced by professional training and intellectual tradition.<sup>26</sup> This “historicist turn” in the philosophy of science opened the door for subsequent scholars such as Imre Lakatos, who sought to combine Kuhn’s historical sensitivity with a more rational model of progress, and Paul Feyerabend, who embraced Kuhn’s challenge to orthodoxy and went further to argue for methodological pluralism.<sup>27</sup>

Beyond the sciences, the concept of the paradigm shift quickly entered popular discourse, finding applications in business, politics, sociology, and cultural studies. In the Nigerian context, political scientists have drawn analogies between Kuhn’s model and shifts in constitutional governance, from colonial rule to military dictatorship, and eventually to democratic systems, each representing a fundamental change in the “rules of the game” and the meanings of political concepts.<sup>28</sup> In this way, *The Structure of Scientific Revolutions* offers not only a framework for understanding scientific change, but also a broader epistemological model for interpreting transformation in diverse human enterprises, including the challenges of multi-ethnic states like Nigeria.

### **3.1.2 Kuhn’s Concept of Scientific Revolution**

Thomas Kuhn’s concept of the scientific revolution remains one of the most transformative ideas in the modern philosophy of science. In Kuhn’s view, a scientific

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<sup>26</sup> Fuller S (2000), *Op. Cit.*, Pp. 143–145.

<sup>27</sup> Lakatos, I. (1978). *The methodology of scientific research programmes* (pp. 8–9). Cambridge: Cambridge University Press.

<sup>28</sup> Osaghae, E. (1998). *Crippled giant: Nigeria since independence* (pp. 56–59). Bloomington: Indiana University Press.

revolution is not simply a moment of extraordinary discovery or the gradual refinement of existing theories; it is a radical transformation in the fundamental framework through which a scientific community understands reality. This transformation involves the replacement of one paradigm (a set of theories, methods, instruments, assumptions, and values) with another that is, in critical respects, incommensurable with the old.<sup>29</sup> This understanding stood in sharp contrast to earlier linear models of scientific progress, which assumed that new theories simply build upon or extend existing knowledge in a straightforward, cumulative fashion.

Kuhn's historical research led him to conclude that science progresses not through steady accumulation, but through episodic ruptures. These ruptures occur when the dominant paradigm (the shared worldview guiding research) becomes unable to account for mounting anomalies, those puzzling observations that resist explanation within the existing theoretical framework. As anomalies accumulate, the scientific community may enter a period of crisis, during which confidence in the old paradigm wanes. A revolution occurs when an alternative paradigm emerges that reorganizes the field, redefines key concepts, and provides new standards of explanation.<sup>30</sup>

The process of a scientific revolution is deeply structural. Kuhn outlined it as a recurring cycle:

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<sup>29</sup> Kuhn, T. S. (2012). *The structure of scientific revolutions* (50th Anniversary ed., pp. 92–94). Chicago: University of Chicago Press.

<sup>30</sup> *Ibid.*, Pp. 10–12, 66–77.

1. **Normal science:** This involves the routine of problem-solving within an accepted paradigm, where scientists engage in “puzzle-solving” by applying established methods to recognized problems.
2. **Crisis:** The accumulation of anomalies and inconsistencies that the paradigm cannot adequately address, leading to doubt within the scientific community.
3. **Revolution:** The adoption of a new paradigm that redefines the discipline’s central concepts, standards, and methods.
4. **New normal science:** Stability under the new paradigm, until the process begins again.<sup>31</sup>

A defining feature of revolutions in Kuhn’s sense is incommensurability which is the inability to translate concepts, methods, and standards from one paradigm into another without loss of meaning. For example, the transition from Newtonian mechanics to Einstein’s theory of relativity did not merely revise certain equations; it transformed the very nature of space, time, and mass. In Newtonian physics, space and time were fixed, absolute entities. Under Einsteinian relativity, they are relative and interdependent, varying with the observer’s frame of reference.<sup>32</sup> While the two paradigms use similar terms, their meanings and conceptual roles differ profoundly, making direct comparison by a neutral standard impossible.

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<sup>31</sup> Ibid., Pp. 66–77.

<sup>32</sup> Ibid., Pp. 101–105.

Kuhn illustrated this transformation through the metaphor of a “Gestalt shift”, likening paradigm change to the perception of the duck-rabbit image (a drawing that can be seen either as a duck or as a rabbit, but never both at the same time.)<sup>33</sup> Just as the viewer cannot hold both interpretations simultaneously, scientists cannot fully inhabit two paradigms at once. Adopting a new paradigm is not just an intellectual decision but a conversion experience that changes what the scientist sees as reality itself.

A crucial implication of this idea is that scientific change is as much social as it is intellectual. Kuhn argued that paradigm shifts do not occur through purely logical demonstration; rather, they require community acceptance, persuasion, and often generational change. Senior scientists, deeply invested in the prevailing paradigm, may resist change, while younger scientists, less bound by the old framework, may be more open to adopting the new.<sup>34</sup> This means revolutions involve not only data and logic, but also personal commitments, institutional politics, and even aesthetic judgments about what counts as an “elegant” theory.

Kuhn’s approach has faced criticism. Karl Popper argued that Kuhn’s model risked portraying scientific revolutions as irrational breaks rather than reasoned improvements, while Imre Lakatos attempted to combine Kuhn’s historical insights with a more systematic theory of scientific progress.<sup>35</sup> Nevertheless, Kuhn’s model has had an

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<sup>33</sup> Ibid., Pp. 111–112.

<sup>34</sup> Ibid., Pp. 150–154.

<sup>35</sup> Popper, K. R. (2002). *The logic of scientific discovery* (pp. 40–43). London: Routledge.

enduring impact because it resonates with how change occurs in many fields beyond science. In sociology, for example, Barry Barnes and David Bloor drew on Kuhn's work to develop the "strong programme" in the sociology of knowledge, emphasizing the role of community consensus and social structures in shaping belief systems.<sup>36</sup>

Beyond academia, the phrase "paradigm shift" has entered everyday language, used to describe any deep and transformative change in business, politics, culture, or technology. The shift from typewriters to personal computers, for instance, or from analog photography to digital imaging, mirrors the dynamics Kuhn described: a dominant framework faces challenges it cannot accommodate, an alternative emerges, and over time the old system is replaced by a new one that redefines the field.

In the Nigerian context, Kuhn's concept of revolution can help illuminate processes of cultural and political transformation. Nigeria's multiple ethnic groups, each with distinct historical experiences, traditions, and social structures, can be thought of as operating within their own "cultural paradigms." Just as scientists within different paradigms may talk past one another, ethnic groups may interpret the same policies, values, legal structures, or historical events through different cultural frameworks. Moments of national crisis, such as constitutional reforms or major political upheavals, often function like Kuhnian revolutions, redefining the "rules of the game" for political life. The adoption of a new political framework, like the shift to democratic rule in 1999, can be

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<sup>36</sup> Barnes, B. (1974). *Scientific knowledge and sociological theory* (pp. 32–35). London: Routledge.

seen as a kind of social paradigm shift, though the persistence of ethnic incommensurability has made national integration a complex and ongoing challenge.

Thus, Kuhn's idea of scientific revolutions is more than a theory about laboratories and scientific journals; it is a framework for understanding how entire systems of thought change, whether in physics, politics, or cross-cultural relations. By emphasizing the historical, social, and conceptual discontinuities that shape human understanding, Kuhn provides a model for analyzing not just the sciences but the dynamics of change in any complex, pluralistic society.

### **3.2 Ethnic Diversity in Nigeria**

Nigeria is one of the most ethnically diverse countries in the world, home to over 250 ethnic groups, each with distinct languages, cultural practices, historical experiences, and political structures.<sup>37</sup> This diversity is not incidental but deeply rooted in the country's history, geography, and patterns of social organization long before the emergence of the modern Nigerian state. Far from being a uniform entity, Nigeria is better understood as a "mosaic of nations" brought together under a single political framework, often without shared foundational values or a unified worldview.

The ethnic diversity of Nigeria is, in large part, a product of pre-colonial political and cultural formations. Prior to colonial rule, the geographical space now called Nigeria consisted of highly organized and independent societies such as the Hausa-Fulani

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<sup>37</sup> Falola, T., & Heaton, M. M. (2021). *A history of Nigeria* (2nd ed., pp. 3–4). Cambridge: Cambridge University Press.

emirates in the north, the Yoruba kingdoms in the southwest, and the Igbo autonomous communities in the southeast. These major groups were joined by numerous minority ethnicities such as the Tiv, Efik, Ibibio, Kanuri, Nupe, Jukun, Idoma, Itsekiri, and Urhobo, each with their own governance systems, religious beliefs, and economic structures.<sup>38</sup>

The British colonial amalgamation of the Northern and Southern Protectorates in 1914 was a pivotal moment in Nigerian history. It created a single administrative unit for political convenience and economic efficiency, but it did not erase the deep cultural and political differences between ethnic groups.<sup>39</sup> This artificial union, conducted without significant input from the indigenous peoples, forced multiple “cultural paradigms” into a single political structure, a scenario reminiscent of Thomas Kuhn’s concept of incommensurable paradigms. Each ethnic group continued to operate within its own framework of meaning, interpreting governance, law, and national identity differently.

The three largest ethnic groups, Hausa-Fulani, Yoruba, and Igbo, dominate Nigeria’s political, economic, and demographic landscape. The Hausa-Fulani, concentrated in the north, are historically linked to Islamic governance structures and hierarchical emirate systems. The Yoruba, in the southwest, developed a blend of monarchy and participatory governance through councils of chiefs and age-grade systems. The Igbo, in the southeast, historically practiced a decentralized, republican form of governance based on village

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<sup>38</sup> Tamuno, T. N. (1972). *The evolution of the Nigerian state: The southern phase, 1898–1914* (pp. 11–15). London: Longman.

<sup>39</sup> Falola, T., & Heaton, M. M. (2021). *Op. Cit.*, pp. 78–82

assemblies and consensus.<sup>40</sup> These governance paradigms shaped not only political life but also social values, patterns of authority, and approaches to conflict resolution.

Surrounding these dominant groups are numerous minority ethnicities, each with their own traditions, such as the Ijaw in the Niger Delta, known for their fishing economies and resistance to external political domination, and the Tiv in central Nigeria, who have a rich tradition of communal decision-making.<sup>41</sup> Together, these groups form a pluralistic society with overlapping but often competing claims on national resources, cultural recognition, and political representation.

As Toyin Falola notes, “*Religion in Nigeria is rarely separable from ethnicity; the two often intertwine to produce complex layers of identity and loyalty.*”<sup>42</sup> This layering creates challenges for national integration, as political and social issues can quickly take on religious overtones, intensifying conflict. Broadly, the north is predominantly Muslim, the southeast predominantly Christian, and the southwest religiously mixed, with Christianity, Islam, and traditional Yoruba religion coexisting. Religion often reinforces ethnic identity, shaping political alliances and deepening group boundaries.

The British colonial policy of indirect rule entrenched ethnic divisions by governing through traditional rulers in the north and adapting different forms of governance in the

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<sup>40</sup> Achebe, C. (1983). *The trouble with Nigeria* (pp. 2–5). London: Heinemann.

<sup>41</sup> Joseph, R. A. (1987). *Democracy and prebendal politics in Nigeria* (pp. 9–10). Cambridge: Cambridge University Press.

<sup>42</sup> Falola, T. (1998). *Violence in Nigeria: The crisis of religious politics and secular ideologies* (p. 15). Rochester, NY: University of Rochester Press.

south. This system fostered regional autonomy but also solidified ethnic boundaries, as administrative units often aligned with ethnic territories.<sup>43</sup> In the post-colonial era, these divisions persisted, influencing political party formations, voting patterns, and federal arrangements.

The early post-independence period (1960–1966) was marked by ethnic rivalry, culminating in the Nigerian Civil War (1967–1970), which was, in part, a manifestation of unresolved ethnic tensions. The war not only deepened mistrust between groups (particularly between the Igbo and the rest of the federation) but also reinforced the perception that Nigeria’s national unity was fragile and contingent.<sup>44</sup>

Ethnic diversity in Nigeria presents both opportunities and challenges. On the positive side, it enriches the country’s cultural heritage, languages, art, music, and systems of knowledge. It offers a wealth of perspectives and adaptive strategies for governance, economy, and diplomacy. However, diversity also creates fault lines in the political system, particularly in resource allocation, power sharing, and representation.

From a Kuhnian perspective, each ethnic group can be seen as operating within its own socio-cultural paradigm, a set of assumptions, values, and traditions that guide how they interpret national policies and priorities. Just as scientists within different paradigms find it difficult to fully communicate without translation, Nigeria’s ethnic groups often

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<sup>43</sup> Mamdani, M. (1996). *Citizen and subject: Contemporary Africa and the legacy of late colonialism* (pp. 110–112). Princeton: Princeton University Press.

<sup>44</sup> De St. Jorre, J. (1972). *The Nigerian civil war* (pp. 18–22). London: Hodder and Stoughton.

interpret the same political developments or value-concept in fundamentally different ways. This incommensurability can make consensus-building difficult and, in moments of crisis, can fuel political instability.

Nigeria's ethnic diversity is both a historical legacy and a contemporary reality. It reflects centuries of cultural evolution but also poses significant challenges for integration and governance. Understanding this diversity through the lens of Kuhn's incommensurability principle provides a valuable framework for examining why national unity remains elusive and why integration efforts must go beyond political arrangements to address the deep cultural and epistemic differences that shape Nigerian society.

### **3.3 The Impact of Ethnic Diversity on Nigeria's Integration**

Nigeria's ethnic composition is one of the most complex in the world, comprising over 250 distinct ethnic groups, each with its own language, traditions, and cultural norms.<sup>45</sup> This remarkable plurality has endowed the nation with rich cultural resources but has also created enduring political and social challenges. The central question that has shadowed Nigeria since independence in 1960 is how to weave these diverse identities into a cohesive national fabric without suppressing the uniqueness of its constituent groups.

Prior to British colonial rule, the territories that now make up Nigeria were home to powerful and independent polities: the Sokoto Caliphate in the north, the Yoruba kingdoms in the west, the Benin Kingdom, and various Igbo-speaking communities in the

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<sup>45</sup> Falola, T., & Heaton, M. (2008). *A history of Nigeria* (pp. 4–6). Cambridge: Cambridge University Press.

east. These societies were politically autonomous and socially distinct, bound together neither by common institutions nor a shared sense of national identity.<sup>46</sup>

The British amalgamation of 1914, motivated largely by administrative and economic convenience, yoked together the Northern and Southern Protectorates into a single colonial unit without meaningful integration of governance structures or socio-cultural systems. Instead, colonial policy deepened regional differences: the north was governed through indirect rule, reinforcing the power of emirs and Islamic institutions, while the south experienced more direct British administration with greater exposure to Christian missions and Western education.<sup>47</sup> These divergent colonial experiences produced distinct political cultures and conceptions of governance that persist to this day.

The colonial economy also encouraged regional specialization, cash crop production in the south (cocoa, palm oil) and groundnuts in the north, which created economic interdependence but also reinforced the perception of each region as an autonomous socio-economic unit.<sup>48</sup> After independence, these historical divides manifested in politics, with political parties aligning along ethnic and regional lines, such as the Northern People's Congress (NPC), the Action Group (AG) in the Yoruba west, and the National Council of Nigerian Citizens (NCNC) in the Igbo-dominated east.

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<sup>46</sup> Tekena Op. Cit., Pp 15–18.

<sup>47</sup> Crowder, M. (1978). *The story of Nigeria* (4th ed., pp. 235–238). London: Faber and Faber.

<sup>48</sup> Hopkins, A. G. (1973). *An economic history of West Africa* (pp. 205–210). London: Longman.

Nigeria adopted a federal system ostensibly to manage its ethnic heterogeneity. In theory, federalism allows for regional autonomy, enabling ethnic groups to preserve cultural distinctiveness while cooperating in a shared national framework.<sup>49</sup> In practice, however, Nigeria's federalism has often been a site of intense competition.

State creation, intended to give minority groups a stake in governance, has multiplied from three regions in 1960 to thirty-six states today. While this has reduced some minority grievances by providing administrative recognition, it has also intensified resource competition and bureaucratic fragmentation.<sup>50</sup> State capitals became centers of political patronage, and control of state government often translated into economic advantage for the dominant ethnic group in that state.

Military rule, which dominated Nigeria from 1966 to 1999 with brief interruptions, complicated federalism by centralizing political and fiscal power. This centralization deepened ethnic suspicion, as decisions about resource allocation and political appointments became associated with whichever ethnic group dominated the federal military leadership at the time. Rotimi Suberu observes that Nigeria's federalism operates less as a neutral arbiter and more as a bargaining arena where ethnic elites seek to maximize group advantage.<sup>51</sup>

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<sup>49</sup> Suberu, R. T. (2001). *Federalism and ethnic conflict in Nigeria* (pp. 45–50). Washington, DC: United States Institute of Peace Press.

<sup>50</sup> Diamond, L. (1988). *Class, ethnicity and democracy in Nigeria: The failure of the First Republic* (pp. 112–114). London: Macmillan.

<sup>51</sup> Suberu, *Op. Cit.* Pp. 73–76.

One of the challenges of ethnic diversity is what Richard Joseph called prebendalism, this is the view that public office is a form of prebend, or personal benefit, to be shared among a leader's supporters, particularly co-ethnics, captures a defining feature of Nigerian politics.<sup>52</sup> Under prebendal politics, public resources are distributed along **ethnic lines**, with each group expecting "its turn" at the national table. This expectation undermines meritocracy and weakens national institutions by prioritizing loyalty over competence.

For example, during the Second Republic (1979–1983), political competition was often framed in terms of ethnic representation rather than policy platforms. Appointments to key positions were evaluated not on national interest but on whether one's ethnic group was "represented." This practice entrenched zero-sum thinking, where gains for one group were perceived as losses for another, eroding trust in the possibility of a truly national government.

### **Economic Competition, Resource Distribution, and the Niger Delta**

Unfortunately in the Niger Delta, oil wealth has magnified the stakes of ethnic politics. The Niger Delta, home to ethnic minorities such as the Ijaw, Itsekiri, and Ogoni, produces the bulk of Nigeria's oil and thus its foreign exchange earnings. Yet these communities

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<sup>52</sup> Joseph, R. A. (1987). *Democracy and prebendal politics in Nigeria: The rise and fall of the Second Republic* (pp. 14–17). Cambridge: Cambridge University Press.

have historically received little tangible benefit from oil revenues, suffering instead from environmental degradation caused by spills and gas flaring.<sup>53</sup>

The perception and reality of exploitation by a distant federal government dominated by other ethnic groups has fueled agitation for “resource control” and sometimes violent resistance. Movements like the Movement for the Emancipation of the Niger Delta (MEND) emerged in the 2000s, attacking oil infrastructure to force concessions from the state and oil companies.<sup>54</sup> Resource conflict in the Niger Delta exemplifies how ethnic identity, economic inequality, and environmental injustice can combine to undermine national integration.

Nigeria’s ethnic pluralism is compounded by religious diversity, with Islam dominant in the north, Christianity prevalent in the south, and significant traditional religious practice across the country. Religious identity often overlaps with ethnic identity, creating compounded cleavages.

Language policy also reflects the difficulty of integration. English, the official language, serves as a neutral medium in administration and education, but it has limited reach in rural areas. While the government has promoted the teaching of three major indigenous

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<sup>53</sup> Obi, C. (2010). Oil extraction, dispossession, resistance, and conflict in Nigeria’s oil-rich Niger Delta. *Canadian Journal of Development Studies*, 30(1–2), 219–236.

<sup>54</sup> Ikein, A. (1990). *The impact of oil on a developing country: The case of Nigeria* (pp. 182–185). New York: Praeger.

languages (Hausa, Yoruba, and Igbo), this policy has been resisted by minority groups fearing cultural assimilation.<sup>55</sup>

These identity cleavages sometimes erupt into conflict, as seen in the recurrent tensions between Christian and Muslim communities in cities like Jos and Kaduna. Such conflicts, even when sparked by local disputes, often take on broader ethnic and religious overtones, eroding trust across communities.

The security challenges facing Nigeria, such as farmer-herder clashes in the Middle Belt to the Boko Haram insurgency in the Northeast, are deeply entwined with ethnic and regional fault lines. Competition over land, worsened by climate change and population growth, has led to deadly confrontations between largely Muslim, nomadic Fulani herders and sedentary farming communities of various ethnic and religious backgrounds.<sup>56</sup>

Boko Haram's rise has further destabilized the Northeastern part of Nigeria, displacing millions and creating humanitarian crises. Although the insurgency is driven by extremist ideology, its recruitment is facilitated by local grievances, including the perception of state neglect and ethnic marginalization.<sup>57</sup>

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<sup>55</sup> Bamgbose, A. (1991). *Language and the nation: The language question in Sub-Saharan Africa* (pp. 97–99). Edinburgh: Edinburgh University Press.

<sup>56</sup> International Crisis Group. (2017, September 19). *Herders against farmers: Nigeria's expanding deadly conflict* (Africa Report No. 252). Brussels: International Crisis Group.

<sup>57</sup> Pérouse de Montclos, M.-A. (2014). Boko Haram and politics: From insurgency to terrorism. In M.-A. Pérouse de Montclos (Ed.), *Boko Haram: Islamism, politics, security and the state in Nigeria* (pp. 135–157). Leiden: African Studies Centre.

It must be noted that integration is not only about material distribution but also about symbolic inclusion, hence the need for national narratives (the stories a country tells about itself) must accommodate multiple perspectives if they are to command loyalty. In Nigeria, the official narratives of the Biafran War (1967–1970) remain contested, with many in the southeast viewing the war as evidence of systemic hostility toward the Igbo people.<sup>58</sup> Failure to reconcile such narratives keeps historical wounds open and fosters intergenerational mistrust.

Nigeria's political engineering efforts, including the federal character principle, zoning arrangements in political parties, and quota systems in public employment, are observed to have been designed to ensure broad ethnic representation. While these measures can reduce overt exclusion, they sometimes entrench ethnic thought by making identity a prerequisite for political advancement.

Despite elite-level competition, ordinary Nigerians often engage in practices that bridge ethnic divides. Nollywood films, Afrobeats music, national football, and urban marketplaces foster shared cultural experiences that cut across ethnic lines.<sup>59</sup> These grassroots forms of integration are fragile but suggest that social cohesion can be cultivated through shared popular culture and economic interdependence.

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<sup>58</sup> Korieh, C. J. (2020). *The Nigeria-Biafra war: Genocide and the politics of memory* (pp. 88–90). Cambridge: Cambridge University Press.

<sup>59</sup> Larkin, B. (2008). *Signal and noise: Media, infrastructure, and urban culture in Nigeria* (pp. 43–45). Durham, NC: Duke University Press.

### **3.4 The Interface between Thomas Kuhn’s Incommensurability Principle and Ethnic Diversity in Nigeria**

Thomas Kuhn’s principle of incommensurability, which is the idea that competing paradigms may be so fundamentally different in their conceptual frameworks, language, and problem-solving methods that full translation between them is impossible, offers a compelling lens for understanding the Nigerian situation.

In science, as Kuhn explains, paradigms define not just answers but the very questions that are considered meaningful.<sup>60</sup> Similarly, in Nigeria, ethnic groups often operate within distinct cultural paradigms that shape their interpretation of national issues. For example, debates over resource allocation, political representation, or religious freedom are not merely disagreements about policy; they are often rooted in fundamentally different conceptions of justice, authority, and community.

Just as scientists working within different paradigms may use the same terminology but mean entirely different things by it, Nigerian ethnic groups may employ shared ethnic or political vocabulary, yet interpret these terms through the lens of their own historical experiences and cultural priorities. For instance, the concept of “federalism” to a northern political leader might emphasize unity and centralized coordination, while to an oil-producing minority in the Niger Delta, it might mean maximal regional autonomy and control over local resources.

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<sup>60</sup> Kuhn Op. Cit., Pp 150–152.

Kuhn also observed that paradigm shifts are often accompanied by resistance, as those embedded within an existing framework find it difficult to accept the assumptions of another. This insight mirrors the Nigerian experience, where constitutional reforms or integration policies are frequently met with skepticism or outright rejection if they appear to privilege one group's worldview over another's.

From a Kuhnian perspective, Nigeria's integration problem is not merely one of distributional fairness but of epistemic translation. Without mechanisms to bridge these incommensurable frameworks, national unity efforts risk being perceived as assimilationist or coercive, deepening rather than resolving divisions.

The difficulty of forging national integration in Nigeria is not solely a question of resource allocation or constitutional design; it is also an epistemic problem. Nigerians do not only argue about who gets what; they often begin from different, and sometimes incommensurable, ways of understanding what counts as justice, authority, evidence, and legitimate procedure. Thomas Kuhn's account of paradigm and incommensurability in *The Structure of Scientific Revolutions* is illuminating here: Kuhn shows how members of distinct scientific communities can interpret the same phenomena in incompatible ways because they operate from different constellations of concepts, exemplars, values, and models.<sup>61</sup> When an analogous situation obtains among ethnic communities, that is, when groups embody distinct, institutionalized ways of seeing political reality, attempts at

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<sup>61</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., pp. 81–87). Chicago: University of Chicago Press.

policy harmonization or imposed uniformity are likely to founder unless the epistemic differences are explicitly addressed.<sup>62</sup>

Kuhn's notion of a disciplinary matrix, which bundles symbolic generalizations, shared exemplars, values, and models, can be reimagined for the socio-political domain.<sup>63</sup> In many Nigerian communities, what functions as a symbolic generalization may be an ethical maxim or cosmological assumption about the social order; what functions as an exemplar may be an historical settlement, a ritual practice, or a well-known local compromise that models how disputes should be resolved. Kwasi Wiredu's insistence on conceptual decolonization in African philosophy provides a complementary corrective here: to engage different worldviews fruitfully we must first recognize the internal coherence of those worldviews and then develop conceptual tools that permit cross-paradigmatic understanding.<sup>64</sup> Only from that platform of epistemic respect can one begin to design institutions that translate between paradigms rather than subsume one under another.

The historical record illustrates how distinct epistemic frameworks were institutionalized in Nigeria from the colonial period. The 1914 British amalgamation welded the Northern and Southern Protectorates into a single political unit without aligning local political cultures or social imaginaries; indeed, colonial administration often preserved and even

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<sup>62</sup> Toyin Op. Cit., Pp. 2–4.

<sup>63</sup> Kuhn Op. Cit., Pp 181–87

<sup>64</sup> Wiredu, K. (1996). *Cultural universals and particulars: An African perspective* (pp. 23–27). Bloomington: Indiana University Press.

amplified preexisting institutional differences by governing the North largely through indirect rule and the South more directly through mission-educated elites and administrative structures.<sup>65</sup> Those administrative choices did not merely produce different governance practices; they produced different baseline assumptions about authority, legality, and political legitimacy that have carried forward into postcolonial politics. As Rotimi Suberu argues, these foundational asymmetries help explain why debates over federalism, devolution, and resource control are often intractable: the parties do not merely disagree about policy details, they disagree about the very premises on which a polity should be organized.<sup>66</sup>

The political parties and alignments of the First Republic were themselves carriers of these divergent paradigms. The Northern People's Congress (NPC), the Action Group (AG), and the NCNC did not merely represent regional interests; they articulated different visions of political order, visions embedded in communal memory, religious practice, and modes of social organization. Conflicts between them were therefore not reducible to patronage; they were collisions of interpretive schemes about what federalism, representation, and public reason meant in practice.<sup>67</sup> The traumatic rupture of the 1966 coups and the Nigerian Civil War only hardened these narrative differences,

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<sup>65</sup> Tamuno, T. N. (1972). *The evolution of the Nigerian state: The southern phase, 1898–1914* (pp. 217–220). London: Longman.

<sup>66</sup> Suberu, R. T. (2001). *Federalism and ethnic conflict in Nigeria* (pp. 42–46). Washington, DC: United States Institute of Peace Press.

<sup>67</sup> Diamond, L. (1988). *Class, ethnicity and democracy in Nigeria: The failure of the First Republic* (pp. 48–66). London: Macmillan.

producing competing memories and moral scripts that continue to shape political perception and trust long after the events themselves.<sup>68</sup>

The practical utility of the Kuhnian frame becomes clearer when we examine concrete case studies in which epistemic mismatch is central. When twelve northern states moved in 1999–2001 to reintroduce aspects of Shari‘a criminal law, the reaction from much of the predominantly Christian south was not only political alarm but an epistemic dissonance about the nature of law itself. For many northerners, Shari‘a constitutes an integrated paradigm of moral and legal order rooted in religious duty and communal practice; for many southerners, law is primarily a secular set of standards administered by a neutral state.<sup>69</sup> Because the dispute implicated differing standards of legitimacy and differing sources of authority, constitutional adjudication and technocratic argument alone were insufficient to settle the matter: the parties were, in many respects, speaking different normative languages.<sup>70</sup>

The Niger Delta’s resource struggles provide another vivid illustration of incommensurability. Federal policymakers have often treated oil revenue allocation as a technical distributive question, one to be addressed through derivation formulas, budgetary transfers, and security arrangements. Many communities in the Delta, by

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<sup>68</sup> Korieh, C. J. (2020). *The Nigeria–Biafra war: Genocide and the politics of memory* (pp. 1–12). Cambridge: Cambridge University Press.

<sup>69</sup> Human Rights Watch. (2004). *Political Shari‘a?: Human rights and Islamic law in Northern Nigeria*. New York: Human Rights Watch.

<sup>70</sup> An-Na‘im, A. A. (2004). Sharia and the problem of Islamic law and human rights. *American Journal of Comparative Law*, 52(4), 775–802.

contrast, articulate the problem in terms of land, custodianship, ritual harm, and moral injury; for them oil is bound up with ancestral land-rights and environmental stewardship, not merely fiscal metrics.<sup>71</sup> Attempts to translate fiscal remedies directly into local reconciliation often fail because they do not engage the moral ecology of harm that local actors identify. Cyril Obi and Augustine Ikein have highlighted that the failure to appreciate these local paradigms has repeatedly turned policy interventions into sources of further grievance rather than instruments of redress.<sup>72</sup>

A third example concerns the farmer–herder conflicts in Nigeria’s Middle Belt. Sedentary agricultural communities and nomadic pastoralists have long embodied divergent ontologies of land use. Farmers tend to construe land as settled, bounded, and cultivated; pastoralists understand vast tracts as seasonally shared commons navigated via migratory routes.<sup>73</sup> These are not merely different economic practices but competing moral geographies in which rights, obligations, and restitution are conceived quite differently. When disputes occur, the parties’ rival paradigms produce incompatible narratives of victimhood and culpability; police or courts that rely on a single set of evidentiary standards can appear partial, thereby escalating conflict.<sup>74</sup>

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<sup>71</sup> Ikein, A. (1990). *The impact of oil on a developing country: The case of Nigeria* (pp. 182–185). New York: Praeger.

<sup>72</sup> Obi, C. (2010). Oil extraction, dispossession, resistance, and conflict in Nigeria’s oil-rich Niger Delta. *Canadian Journal of Development Studies*, 30(1–2), 219–236.

<sup>73</sup> International Crisis Group. (2017). *Herders against farmers: Nigeria’s expanding deadly conflict* (Africa Report No. 252, pp. 2–10). Brussels: International Crisis Group.

<sup>74</sup> Ibid.

Kuhn's account also helps explain when and how translation between paradigms is possible. He emphasized that paradigm change in science rarely occurs by pure logical refutation; it often proceeds through exemplars and conversion experiences in which practitioners learn to see new phenomena the way members of the rival paradigm do.<sup>75</sup> The social analogue, therefore, is to create shared exemplars and practices that permit gradual reorientation of perception: joint environmental assessments in oil-producing areas, participatory land-mapping between herders and farmers, or hybrid justice panels that combine customary dispute resolution with constitutional safeguards. Empirical reports from practitioners and policy analysts which includes several Crisis Group field studies, shows that such modalities can lower the temperature of disputes precisely because they create shared problem-frames rather than attempting immediate doctrinal settlement.<sup>76</sup>

Yet the Kuhnian frame also warns against naiveté. Epistemic translation is neither instantaneous nor purely procedural; it requires sustained pedagogy, reciprocal recognition, and trust-building over time. John Rawls's idea of an overlapping consensus (political principles endorsed for different reasons by differing comprehensive doctrines) is useful here because it suggests the possibility of shared institutional commitments that do not force a single substantive metaphysics upon all parties.<sup>77</sup> At the same time, the Rawlsian strategy cannot substitute for material justice: where substantive deprivations or

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<sup>75</sup> Kuhn, Op. Cit., Pp. IX–XIII

<sup>76</sup> International Crisis Group Op. Cit., Pp. 2-10

<sup>77</sup> Rawls, J. (1993). *Political liberalism* (pp. 4–9). New York: Columbia University Press.

environmental harms persist, translation efforts will founder without remedial measures that address those injustices as credible commitments, not mere rhetorical concessions.<sup>78</sup>

Putting these lessons into practice calls for an interlocking set of measures that combine symbolic recognition, institutional design, and epistemic pedagogy. Symbolic recognition entails constructing civic rituals and curricula that integrate multiple historical narratives, for example, addressing contested memories of the Biafran War in a manner that attends to both national unity and regional trauma thus creating shared exemplars in the civic imagination. Institutional design requires permanent translation mechanisms: commissions and local councils composed of traditional and technocratic actors who deliberate in plural vocabularies, participatory budgeting units that embed cultural criteria alongside fiscal metrics, and hybrid courts that recognize customary law within constitutional limits. All three vectors are consistent with a Kuhnian insight: paradigmatic differences are not merely obstacles to be eliminated; they are structural features to be navigated through exemplar-based, practice-oriented encounters that alter how actors perceive problems and solutions.<sup>79</sup>

By and by, Nigeria's plural politics through Kuhn's incommensurability principle reframes national integration as fundamentally a project of concern for total emancipation in every sphere of development. The practical implication is modest yet demanding:

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<sup>78</sup> Ikein, A. (1990). *The impact of oil on a developing country: The case of Nigeria* (pp. 182–185). New York: Praeger.

<sup>79</sup> Wiredu Op. Cit. Pp. 23–27.

policymakers must treat divergent cultural grammars as legitimate starting points for negotiation rather than as distortions to be corrected by technocratic fiat. Only by creating durable, shared exemplars and institutional spaces for translation will Nigeria be able to cultivate the reciprocal intelligibility on which a genuinely plural and stable polity depends.<sup>80</sup>

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<sup>80</sup> Habermas, J. (1996). *Between facts and norms: Contributions to a discourse theory of law and democracy*. Cambridge, MA: MIT Press.

## CHAPTER FOUR

### EVALUATION, RECOMMENDATION AND CONCLUSION

#### 4.1 Evaluation

The evaluation of this work rests on whether Thomas Kuhn's incommensurability principle can serve as an effective lens for interpreting Nigeria's persistent challenges with ethnic diversity and national integration. The application of a theory from the philosophy of science to the socio-political realities of Nigeria may initially seem unconventional, but upon closer inspection, the parallels become striking.

At the heart of Kuhn's work is the recognition that knowledge is structured by paradigms, which are comprehensive frameworks that define what counts as valid evidence, legitimate methods, and even meaningful questions. Paradigms, as Kuhn emphasizes, are not neutral but culturally and historically embedded.<sup>1</sup> Within one paradigm, reality appears coherent and intelligible, but when compared to another, mutual understanding becomes strained. The implication for Nigeria is clear: its ethnic groups may be operating not merely with different cultural customs, but with fundamentally different epistemic paradigms that structure how they perceive justice, power, and identity.

Take the reintroduction of Shari'a law in northern Nigeria in 1999–2001. For northern Muslims, Shari'a represents a divinely ordained and historically legitimate system of justice. For many southern Christians, however, law must be secular, rooted in

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<sup>1</sup> Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed., pp. 150–152). University of Chicago Press.

constitutionalism and human rights frameworks. Thus, the disagreement is not simply about policy implementation but about the very definition of legitimate law. Each paradigm generates criteria of validity that appear self-evident to insiders but foreign to outsiders.<sup>2</sup>

Similarly, the resource control debate in the Niger Delta exemplifies competing paradigms. The federal government often frames the issue as one of fiscal equity, arguing about percentages of revenue derivation. Local communities, however, view oil as inseparable from ancestral land and sacred custodianship. To them, the appropriation of oil revenues without adequate restitution constitutes both economic exploitation and moral desecration. These divergent lenses make negotiation fraught, as fiscal formulas cannot easily be translated into paradigms of land, kinship, and ecological justice.<sup>3</sup>

The farmer–herder conflicts in the Middle Belt provide another instance. Sedentary farmers view land as private property, permanently owned and cultivable. Fulani pastoralists, on the other hand, conceive of land as open and seasonal, embedded in migratory patterns. These worldviews clash not simply as economic interests but as rival

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<sup>2</sup> Ostien, P. (2007). *Sharia implementation in Northern Nigeria 1999–2006: A sourcebook* (pp. 15–19). Spectrum Books.

<sup>3</sup> Obi, C. (2001). Oil and the minority question in Nigeria: The Niger Delta experience. *African Development*, 26(3–4), 27–45.

paradigms of land use and identity. To resolve the conflict without recognizing this epistemic divergence is to miss its deeper root.<sup>4</sup>

These cases demonstrate the explanatory power of Kuhn's principle. Nigeria's ethnic conflicts endure not only because of weak institutions or resource scarcity but also because the paradigms underpinning ethnic groups' perceptions are mutually resistant to translation. National policies often fail because they are formulated within one paradigm but imposed across others without adequate epistemic translation.

Yet, Kuhn's framework also reveals limitations. Critics such as Karl Popper argued that science progresses by falsification and that Kuhn overemphasized the discontinuity of paradigms, thereby flirting with relativism.<sup>5</sup> If taken uncritically, applying Kuhn to Nigeria risks entrenching ethnic differences by portraying them as insurmountable. However, Kuhn's later clarifications stress that communication between paradigms is not impossible, it is simply arduous and requires translation, reinterpretation, and sometimes, creative redefinition of shared terms.<sup>6</sup> This nuance is crucial for Nigeria: ethnic paradigms are not forever locked in isolation but can engage in dialogue if mediated properly.

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<sup>4</sup> International Crisis Group. (2018). *Herders against farmers: Nigeria's expanding deadly conflict* (ICG Report, pp. 5–10). International Crisis Group.

<sup>5</sup> Popper, K. R. (2002). *The logic of scientific discovery* (pp. 40–43). Routledge.

<sup>6</sup> Lakatos, I., & Musgrave, A. (Eds.). (1970). *Criticism and the growth of knowledge* (pp. 56–60). Cambridge University Press.

In summary, the evaluation shows that Kuhn's principle of incommensurability provides a diagnostic tool for understanding Nigeria's ethnic conflicts at a deeper level. It reveals why integration efforts often fail, exposes the intricacies of the problem, but also points toward dialogical strategies that can bridge divides.

## **4.2 Recommendations**

If Nigeria's integration problem is epistemological at its core, then solutions must go beyond mere political engineering or economic redistribution. The following recommendations flow from Kuhn's framework while addressing the Statement of the Problem.

### **1. Establish Epistemic Dialogue Platforms.**

Philosophy should serve as a mediator by fostering structured forums where ethnic paradigms are articulated, recognized, and compared. For instance, dialogues between northern Islamic scholars, southern Christian leaders, and representatives of minority traditions could create mutual understanding of differing concepts of justice and authority. Such platforms must avoid the assimilationist trap of privileging one paradigm as the "universal" model. Instead, they should emphasize what John Rawls calls an "overlapping consensus," where different paradigms converge on shared practical agreements despite theoretical differences.<sup>7</sup>

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<sup>7</sup> Rawls, J. (1993). *Political liberalism* (pp. 133–135). Columbia University Press.

## **2. Reform Education as a Tool of Pluralism.**

Education in Nigeria must be reimagined to cultivate epistemic humility and intercultural literacy. Currently, curricula often marginalize indigenous knowledge while elevating Western epistemologies. A pluralist curriculum that integrates African philosophy, traditional epistemologies, and civic ethics would prepare students to navigate multiple paradigms. Kwasi Wiredu's call for conceptual decolonization is especially pertinent here: Nigerians must learn to interpret Western categories critically while affirming indigenous frameworks as valid knowledge systems.<sup>8</sup>

## **3. Promote Dialogical Federalism.**

Nigeria's federalism has often functioned as a mechanism of resource distribution rather than epistemic negotiation. A dialogical federalism would recognize cultural paradigms explicitly in governance. This could involve embedding cultural translation mechanisms into policymaking. For example, environmental policies in the Niger Delta should not only address fiscal equity but also engage moral frameworks of land and kinship. Similarly, debates on Shari'a law should be framed not only constitutionally but also theologically, ensuring all paradigms find intelligible entry points.

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<sup>8</sup> Wiredu, K. (1996). *Cultural universals and particulars: An African perspective* (pp. 58–62). Indiana University Press.

#### **4. Address Historical Narratives of Exclusion.**

Integration requires a reconciliation of contested histories, particularly the Nigerian Civil War (1967–1970). Many Igbo communities interpret the war as systemic exclusion, while official narratives downplay this dimension. A pluralist historiography, open to multiple perspectives, would cultivate mutual recognition rather than historical erasure. As Paul Ricoeur argues, shared memory is essential for national reconciliation; forgetting or silencing one group’s perspective entrenches mistrust.<sup>9</sup>

#### **5. Institutionalize Epistemic Justice.**

National policies should consciously avoid epistemic injustice, the silencing or delegitimizing of certain groups’ ways of knowing. This could be achieved by ensuring diverse representation in national decision-making bodies, not only for demographic balance but for epistemic inclusion. When ethnic groups perceive their paradigms as recognized, legitimacy is strengthened even in the face of disagreement.

#### **6. Leverage Cultural Integration through the Arts.**

While elite-level politics often entrenches division, popular culture (Nollywood, Afrobeats, national sports) demonstrates the possibility of grassroots integration. State policy should deliberately invest in these cultural industries as vehicles for fostering

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<sup>9</sup> Ricoeur, P. (2004). *Memory, history, forgetting* (K. Blamey & D. Pellauer, Trans., pp. 448–452). University of Chicago Press.

shared identity that transcends ethnic paradigms, without erasing them. These shared experiences offer a practical counterweight to epistemic divides.

In essence, recommendations rooted in Kuhn's framework emphasize not assimilation but dialogue, not uniformity but coexistence. Integration becomes possible when ethnic paradigms are acknowledged as legitimate, translated into common frameworks, and engaged in processes of mutual critique.

### **4.3 Conclusion**

This study set out to address a pressing question: can Thomas Kuhn's incommensurability principle, originally designed to explain scientific revolutions, help illuminate and potentially mitigate Nigeria's ethnic conflicts? The answer, emerging from the preceding chapters, is affirmative, though with important qualifications.

Nigeria's ethnic groups often inhabit epistemic paradigms so distinct that dialogue across them is hindered. This of course have led to various conflicts that reveal how ethnic worldviews structure perceptions of justice, ownership, and legitimacy in ways that resist simple translation. This helps explain why decades of federalism, resource-sharing formulas, and political reforms have failed to resolve Nigeria's integration problem: they assume a shared epistemic framework that does not exist.

Yet, Kuhn's work does not end in despair. Just as scientific communities eventually bridge paradigmatic divides, Nigeria can also foster cross-paradigmatic understanding. Philosophy's role is central here, as mediator, translator, and advocate for pluralism.

Through education reform, dialogical federalism, reconciliation of contested histories, and epistemic justice, Nigeria can move from a fragile coexistence toward genuine integration.

This research also contributes to philosophy by demonstrating that Kuhn's principle, far from being limited to science, has wider applicability to multicultural and multi-ethnic societies. It underscores the value of comparative and hermeneutical philosophy in addressing real-world crises.

Finally, it calls for a paradigm shift in how Nigerians themselves view integration, not as the erasure of ethnic differences but as the cultivation of epistemic dialogue across them.

In this light, Kuhn's work becomes not only an interpretative tool but a practical guide for Nigeria's future: unity is not the product of imposed sameness but of dialogical coexistence amid difference.

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