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SCIENCE AND ETHNO-RELIGIOUS MYTHS: CONFLICT AND COEXISTENCE

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Abstract

This paper examines the relationship between science and ethno-religious myths, focusing on whether they inevitably conflict or can coexist as complementary ways of knowing. The guiding research question is: In what ways do science and ethno-religious myths intersect to generate conflict, and under what conditions can they coexist? Employing the philosophical method of analysis, the study explores historical and contemporary contexts where scientific discoveries have challenged entrenched mythological beliefs, as well as instances where myths have shaped social attitudes toward scientific practice. The analysis reveals that science, rooted in empirical investigation and rational inquiry, often exposes the limitations of mythological explanations, such as beliefs in abiku/ogbanje or twin-killing practices. At the same time, myths, embedded in culture and religion, provide frameworks of meaning, identity, and moral orientation that science alone cannot supply. Findings show that while the two systems rest on distinct epistemological foundations, they are not wholly incompatible. When critically engaged, science can illuminate the symbolic significance of myths, while myths can enrich the cultural context in which science is applied. The paper concludes that fostering a balanced understanding of both domains is crucial for intercultural dialogue, ethical reflection, and inclusive knowledge advancement. Recognizing their coexistence allows for preserving cultural identity while mitigating harmful practices through scientific insight.

Keywords: Science; Ethno-Religious Myths; Conflict; Coexistence; Knowledge Systems.

Introduction

The interaction between science and ethno-religious myths remains a complex and contested domain in philosophy, anthropology, and cultural studies. Science, rooted in empirical observation and rational inquiry, seeks universal explanations of natural phenomena (Russell,

1972). Ethno-religious myths, by contrast, transmit communal narratives that define moral values, cosmological outlooks, and social identity (Eliade, 1995; Lévi-Strauss, 2008). Across civilizations, these myths have provided explanatory frameworks for understanding the environment, shaping rituals, and sustaining social cohesion. However, conflict often arises when scientific discoveries contradict mythological accounts, such as Galileo's challenge to ecclesiastical cosmology (Galilei, 1953/1632) or African cultural practices like twin-killing and ritual circumcision later reinterpreted by medical science (Achebe, 1976). Despite this tension, both science and myth remain indispensable to the human quest for knowledge and meaning.

The central question this paper addresses is: *How do science and ethno-religious myths intersect in ways that generate conflict, and under what conditions can they coexist as complementary systems of knowledge?*

Objectives

The article aims to:

1. Trace historical and contemporary conflicts between science and ethno-religious myths.
2. Analyze the influence of myths on cultural responses to scientific inquiry.
3. Assess the potential for coexistence and complementarity between the two domains.

This paper, therefore, argues that while science and ethno-religious myths operate within distinct epistemological frameworks, they are not irreconcilable. Instead, when critically engaged, science can illuminate harmful practices rooted in myth, while myths preserve cultural identity and offer symbolic insights that enrich scientific application.

Literature Review

Scholarly debates reflect divergent perspectives on the relationship between science and religion. Coyne (2015) argues that the two are incompatible since religion relies on faith, while science depends on evidence and reason. Hume (2000) also dismissed religious myths as irrational illusions. Conversely, Gould (1999) advanced the concept of "non-overlapping magisteria," proposing that science and religion serve distinct purposes and can therefore coexist. Eliade (1995) and Jung (2011) emphasized myths as either sacred structures or archetypes shaping consciousness, while Lévi-Strauss (2008) underscored their role in organizing human thought.

African scholars and writers deepen this discourse by situating the debate within cultural realities. Achebe (1976) highlighted the role of Igbo myths in shaping practices like twin-killing, while Soyinka (1967) explored Yoruba myths of *abiku*, which modern science associates with genetic disorders such as sickle-cell anemia. Unah (1996) demonstrated how African metaphysical traditions, though rooted in myth, remain open to phenomenological analysis, enabling dialogue with science. Gyekye (1997) underscored the symbolic and moral dimensions of African traditional thought, cautioning against its outright dismissal in the face of modernity, while Wiredu (1998) advocated for conceptual decolonization, urging a critical but respectful engagement between African traditions and contemporary rational systems such as science.

Together, these perspectives show that while science and myth have often been seen as oppositional, there is intellectual space for complementarity. Yet a gap remains in systematic studies that not only analyze conflict but also articulate pathways toward coexistence. This article seeks to fill that gap by demonstrating how science and ethno-religious myths can engage productively without negating each other's epistemic value.

Methodology

This study adopts a **philosophical-analytical methodology**, which is most appropriate for interrogating conceptual, historical, and cultural questions surrounding the relationship between science and ethno-religious myths. The choice of this method is informed by the study's concern with clarifying concepts, analyzing arguments, and evaluating the epistemological and cultural implications of science and myth rather than generating statistical data.

Research Design

The design of this research is **qualitative and interpretive**. It draws from philosophy, the history of ideas, and cultural studies to examine how scientific inquiry and mythological worldviews interact. Unlike empirical sciences that depend on experimentation, this study employs **critical analysis of texts, traditions, and practices** to understand their underlying assumptions, tensions, and possibilities for complementarity.

Sources of data

The study is based on **secondary sources**, including:

1. **Classical philosophical texts** (e.g., Hume, Russell, Gould, and Jung).
2. **Anthropological and religious studies literature** (e.g., Eliade, Lévi-Strauss).
3. **African philosophical and literary works** (e.g., Achebe, Soyinka, Gyekye, Unah, and Wiredu).
4. **Historical and contemporary accounts** of practices such as twin-killing, ogbanje/abiku myths, and female circumcision, and how they have been reinterpreted or displaced by scientific knowledge.

These sources are examined critically to highlight the dialectical relationship between science and ethno-religious myths.

Analytical Procedure

The analysis proceeds through three interrelated steps:

1. **Conceptual Analysis:** Clarification of key concepts such as *science*, *myth*, *ethno-religious worldview*, *conflict*, and *coexistence*, to prevent ambiguities and establish a clear theoretical framework.
2. **Comparative Evaluation:** Systematic comparison of the epistemological bases of science (empiricism, rationalism, experimentation) and myth (symbolism, sacred narrative, cultural archetypes), identifying areas of conflict and convergence.

3. **Hermeneutic Interpretation:** Using a hermeneutic lens, the study interprets the cultural significance of myths in African and global contexts while situating them against the historical development of science. This interpretive process also considers how science redefines or recontextualizes myths without wholly negating their socio-cultural relevance.

Justification of Method

The philosophical-analytical approach is justified because the study is not concerned with quantifiable data but with examining conceptual, historical, and cultural dimensions of knowledge systems. By engaging multiple perspectives across Western and African thought traditions, this method allows for a nuanced understanding of how science and ethno-religious myths can move beyond conflict toward complementarity.

Findings

1. **Complementarity rather than Mutual Exclusivity:**
   The study finds that science and ethno-religious myths, though grounded in different epistemological frameworks, are not entirely opposed. Rather than being mutually exclusive, they can offer complementary insights into human experience when their distinct roles are acknowledged.
2. **Science as a Corrective Lens:**
   Science has historically demystified harmful practices rooted in ethno-religious myths—such as the killing of twins, belief in *ogbanje/abiku*, and ritual circumcision—by providing medical and empirical explanations.
3. **Myths as Cultural Frameworks:**
   Ethno-religious myths serve as reservoirs of meaning, identity, and moral orientation. They provide narratives through which communities make sense of existence, even where scientific explanation is absent or insufficient.
4. **Dynamic Coexistence:**
   The findings suggest that science and myths are in a dynamic relationship marked by tension but also convergence. Myths adapt under scientific scrutiny, while science often emerges within cultural frameworks originally shaped by mythological worldviews.

Implications

These findings imply that the conflict between science and myth should not be viewed purely as antagonistic. Instead, intercultural dialogue between the two systems is essential for:

- Promoting ethical reflection in scientific application.
- Preserving cultural identity while eliminating harmful practices.
- Creating inclusive knowledge systems that integrate empirical and symbolic dimensions of human understanding.

This reinforces the research question by showing that science and myths intersect both as sites of conflict and as potential partners in coexistence.

Comparison with Previous Studies

- **Similarities:**
  The findings align with Gould's (1999) claim of "non-overlapping magisteria," where science and religion serve different domains but can coexist peacefully. They also resonate with Eliade (1995), who viewed myths as sacred frameworks sustaining meaning, and with African philosophers like Gyekye (1997), who cautioned against the wholesale dismissal of African traditions in the face of modern science.
- **Differences:**
  Unlike Coyne (2015) and Hume (2000), who categorically reject the compatibility of science with religion or myth, this study emphasizes **complementarity**. It goes beyond Gould's (1999) model by arguing that science and myth do not merely coexist in separate domains but can actively enrich one another.
- **African Context:**
  Consistent with Achebe (1976) and Soyinka (1967), the study demonstrates how African myths (e.g., *ogbanje, abiku,* and twin-killing practices) reveal cultural responses to existential challenges, but it also highlights how science has provided corrective reinterpretations—an area less emphasized in Western scholarship.

In short:

- The study finds that science and ethno-religious myths are **complementary rather than irreconcilable**.
- The implication is that both systems are needed for a holistic understanding of human knowledge.
- Compared to prior studies, this work stands out by stressing **complementarity within African cultural contexts**, where myths are not simply opposed to science but evolve alongside it.

Discussions and Concepts

1. Classical Myths and the Human Quest for Meaning

Religious myths have served as humanity's earliest responses to existential questions and natural phenomena. They provided explanations where empirical observation was absent and offered moral frameworks for communal life. In Mesopotamia, the *Epic of Gilgamesh* narrated the search for immortality, while in Greece, Hesiod's *Theogony* and Homer's epics provided elaborate cosmologies and heroic ideals (Hesiod, 2008; Homer, 1998).

Greek mythology, in particular, symbolized ideals of bravery, wisdom, and divine intervention in human affairs. Heroes like Achilles and Odysseus embodied virtues that shaped cultural and moral expectations (Homer, 1998). These myths reinforced social order by embedding human experience within a cosmic framework of gods and destiny.

As Lévi-Strauss (2008) argued, myths are not mere stories but "living structures" that evolve with society, continually transmitting cultural codes across generations. Eliade (1995) similarly described them as "sacred histories" that connect the profane world to transcendent realities, providing communities with continuity and meaning.

2. African Myths and Cultural Practices

African civilizations also developed ethno-religious myths that shaped worldviews and ritual practices. Among the Igbo, Efik, and Ibibio, the birth of twins was once considered an

abomination, leading to the killing or abandonment of infants (Achebe, 1976). Similarly, ritual practices such as female circumcision were justified as rites of passage, believed to safeguard morality and marital fidelity.

The *ogbanje* (Igbo) and *abiku* (Yoruba) myths exemplify Africa's spiritual explanations of infant mortality. Soyinka (1967) poetically explored the existential struggle of the *abiku*, while Achebe (1976) documented the cultural weight of the *ogbanje*. Modern science has since explained these phenomena in terms of genetic disorders such as sickle cell disease, demonstrating the corrective potential of empirical inquiry.

These myths, while sometimes harmful in practice, also served adaptive functions. They provided communities with symbolic frameworks for coping with suffering, illness, and uncertainty. Torchinov (2005) observed that rituals—embodied enactments of myths—are psychologically powerful, offering meaning and cohesion through shared symbolism.

3. The Emergence of Greek Science

The emergence of science in ancient Ionia (6th century BCE) marked a decisive shift from mythological to naturalistic explanations of reality. Thinkers such as Thales, Anaximander, and Anaximenes sought rational accounts of natural phenomena. Thales proposed water as the underlying substance of all things, while Anaximander theorized the *apeiron* (the boundless) as the origin of existence (Russell, 1972).

Unlike poets who attributed earthquakes to Poseidon or lightning to Zeus, these early philosophers offered explanations rooted in observable natural forces. Their commitment to rational criticism and universal principles distinguished them from mythological traditions.

This intellectual trajectory continued with the Pythagoreans, who emphasized numerical harmony, and the atomists, who argued that matter consisted of indivisible atoms. Aristotle (384–322 BCE) synthesized these traditions into a comprehensive philosophical system, advancing biology, logic, and metaphysics. His doctrine of the *four causes* sought to explain not only phenomena but their purpose, laying groundwork for later scientific inquiry (Russell, 1972).

4. The Scientific Revolution and the Break from Myth

Greek science deeply influenced medieval scholarship, particularly through the preservation of Aristotelian texts by Islamic thinkers. However, it was the Scientific Revolution of the 17th century that institutionalized science as an independent, secular pursuit. Thinkers like Galileo (1953/1632), Bacon (2000/1620), Descartes (1998/1637), Boyle (2008/1661), and Newton (1999/1687) emphasized empirical experimentation and mathematical formulation, displacing mythological cosmologies with mechanistic explanations. Darwin's *On the Origin of Species* (1859) further challenged religious myths by offering a naturalistic account of life's diversity through evolution. This marked a decisive separation between myth-based worldviews and scientific explanations, giving rise to modern scientific disciplines (Russell, 1972). From then on, science gained authority as a professional, secular endeavor, distinct from theology or myth.

5. Science and Ethno-Religious Myths: Conflict and Dialogue

The relationship between science and myth has been interpreted in multiple ways. Coyne (2015) argues that science and religion are fundamentally incompatible since the former relies

on evidence while the latter depends on faith. Hume (2000) dismissed religious myths outright, labeling them illusions devoid of rational credibility.

Conversely, Gould (1999) proposed the model of "non-overlapping magisteria," where science and religion serve distinct domains and need not conflict. Jung (2011) viewed myths as archetypes shaping human consciousness, while Eliade (1995) emphasized their role in sustaining sacred meaning.

African philosophers offer nuanced contributions. Unah (1996) argued that African metaphysics, though rooted in myth, can engage phenomenologically with modern rationality. Gyekye (1997) insisted that African traditions contain enduring symbolic and moral significance, while Wiredu (1998) advocated for "conceptual decolonization," encouraging dialogue between traditional thought and modern science.

6. Science as Corrective and Complementary

The study highlights three critical ways science interacts with myths:

1. **Corrective Function:** Science has exposed the dangers of harmful myth-based practices such as twin-killing and ritual circumcision. Medical science's explanation of sickle cell disease reinterpreted ogbanje/abiku myths, offering new frameworks for understanding mortality (Achebe, 1976; Soyinka, 1967).
2. **Illumination:** Science provides empirical clarity, dispelling ignorance. Galileo's assertion of a spherical earth, though opposed by the Church, exemplifies science's power to challenge entrenched myths with verifiable truth (Galilei, 1953/1632).
3. **Complementarity:** Myths, while not empirically verifiable, preserve cultural heritage and provide existential meaning. Science, rather than erasing myths, can recontextualize them, allowing both systems to coexist. As Torchinov (2005) emphasized, myths and rituals meet deep psychological needs that scientific rationality alone cannot satisfy.

Conclusion

This study has examined the intricate relationship between science and ethno-religious myths, tracing their historical development, cultural significance, and points of conflict and convergence. From the sacred narratives of antiquity to African myths that shaped social practices, and from the naturalistic explanations of the early Greek philosophers to the experimental rigor of the Scientific Revolution, it is evident that both science and myth have played indispensable roles in humanity's pursuit of knowledge and meaning. The findings suggest that science and myth are not mutually exclusive but rather complementary: science provides corrective clarity to harmful or misleading practices, while myths preserve cultural identity, moral orientation, and existential meaning. Their relationship is dynamic, as myths evolve in the face of scientific discoveries, and science itself often emerges within cultural frameworks shaped by myth. In addressing the central research question, the study concludes that conflict arises when one system seeks to invalidate the other, but coexistence is possible when their distinct domains are respected. Science illuminates empirical truth, while myths sustain symbolic frameworks of human existence. Ultimately, the dialogue between them should be seen not as a contest but as a conversation between two dimensions of knowledge—

one grounded in empirical inquiry, the other in cultural meaning-making—together enriching humanity's response to both material and existential challenges.

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