

An Archaeo-Zoological Analysis of the Animal Sculptures at the Konark Sun Temple in Orissa, India

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Introduction

In the medieval temple architecture of the Indian subcontinent, animal figures hold an extremely unique and deeply philosophical place (Brown, 1956). According to Indian philosophical thought, a religious building is not just a structure made of bricks and stones; it is considered a microcosm of the entire universe. Therefore, depicting all living beings of the universe within the temple structure was an essential element. The pinnacle and paramount creation of this Kalinga art tradition is the Konark Sun Temple in Orissa, built in the 13th century (1238-1264 AD) by King *Narasimhadeva I*, the most powerful ruler of the Eastern Ganga dynasty (Mitra, 1968). Designed in the shape of the Sun God's giant chariot, complete with 24 massive wheels and 7 horses, this temple is world-renowned for its astronomical symbolism and lifelike erotic sculptures. However, another incredibly powerful yet often underappreciated element that determines the aesthetic and historical value of this temple is the system of thousands of animal figures and statues scattered across the temple grounds, outer walls, platforms, and stairways (Sivaramamurti, 1974).

The Symbolic Value of Living and Mythical Animal Figures

These animal creations, meticulously carved from stone by artisans, can be primarily categorized into two main groups:

Animals of the Real World: Animals seen in the everyday environment, such as elephants, war horses, lions, birds, monkeys, and deer, are depicted here. This demonstrates the high biodiversity present in the environment at the time and the close relationship humans maintained with animals.

Mythical and Imaginative Animals: Mythical animal figures born from cultural imagination, such as the water deity 'Makara' and the '*Gaja-Vidala*' or '*Vyala*', which are believed to possess supernatural powers, were thought to provide protection to the temple.

As a Social and Political Mirror

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These animal figures are not merely artistic decorative elements used to fill empty spaces on the temple's stone walls. They can be described as a living archaeological source that depicts the state power, military strength, religious philosophy, and environmental knowledge of the time (Donaldson, 1985). For instance, the thousands of elephant carvings (Gajathara) around the lowest platform of the temple display the economic and military might of the king (the term 'Gajapati' means Lord of Elephants), while the giant war horse statues showcase their martial prowess to society.

Objectives of the Research

- To identify and categorize the depicted animal species and mythical animal figures at the Konark Sun Temple.
- To evaluate the environmental conditions of the Orissa region in the 13th century and the animal anatomical knowledge of the artisans as depicted through these animal carvings.
- To archaeologically analyze the military strength, royal symbolism, and religious and philosophical background of the time through animals such as elephants, horses, and lions.

Research problem

What were the socio-political, religious, and environmental reasons that influenced the creation of such an abundant and intricate array of animal figures and mythical animal carvings on the outer walls, platforms, and staircases of a highly sacred Hindu Sun Temple? What are the archaeozoological facts revealed about 13th-century Kalinga society through these creations?

Research Methodology

This study is based on a qualitative research methodology. Entirely secondary sources and literature reviews have been utilized for data collection. Archaeological reports of the Konark Temple, scholarly texts on art history, and research papers related to archaeozoology were extensively studied (Behera, 1996; Mitra, 1968). In particular, classical texts containing Indian architectural principles such as the 'Silpa Prakasa' (Boner and Rath Sarma, 1966), as well as photographs and iconographic notes of the temple's animal figures, were used for data analysis.

Results and Discussion

Representation of Royal Power and Military Strength

The 'Gajathara' band designed around the lowest platform of the temple becomes a crucially important factor in this study, where over two thousand elephants are intricately carved. It vividly and sequentially depicts the entire process of capturing wild elephants, taming them, and ultimately utilizing them for military purposes, much like a series of movie frames (Lal, 1965).

Furthermore, the giant statues of the seven horses pulling the chariot of the Sun God and the statues of war horses stationed in the temple courtyard validate the historical background of the active Arabian horse trade at the time. Moreover, the accuracy of their anatomical features, including muscles and bone structures, clearly demonstrates the high anatomical knowledge possessed by the artisans (Das, 1982).

Religious Symbolism and Mythical Animal Figures

The giant 'Gaja-Simha' (a lion standing on top of an elephant) statues positioned on both sides of the temple's main staircase convey a deep philosophical meaning. The lion here is a symbol of Hinduism or courage, while the defeated elephant in the lion's grasp symbolizes the decline of Buddhism at the time or the collapse of human arrogance (Huntington, 1985). Additionally, imaginary figures like the 'Makara' and 'Vidala' are abundant, representing a strong belief in society at the time that these mythical creations protected from supernatural forces (Boner and Rath Sarma, 1966).

Environmental Consciousness and Everyday Life

In addition to the massive creations mentioned above, birds, monkeys, deer, wild boars, and various domestic animals are carved in a very natural way across the temple walls. This serves as a mirror perfectly reflecting the immensely rich biodiversity that existed in the Orissa region in the 13th century (Michell, 1988).

The Giraffe Sculpture and Global Relations

Among the thousands of animal carvings in this temple, the Giraffe Sculpture is the most surprising and historically significant. This unique stone carving depicts a historical moment where a group of foreign merchants or ambassadors presents a giraffe as a gift to an Indian King (most likely King Narasimhadeva I).

Since giraffes are a species completely confined to the African continent, an African animal being accurately depicted on the wall of an Indian temple built about 800 years ago is considered a remarkable milestone. This carving confirms that a very strong maritime trade network existed across the Indian Ocean between the ancient Kalinga kingdom and East Africa or Middle Eastern countries. The anatomical accuracy further confirms that the artisans created this carving after seeing a live animal with their own eyes.

Conclusion

These creations are by no means architectural elements used merely to fill empty spaces or for purely visual decoration. Indeed, these stone carvings are like a living 'lithic document' that has inscribed the socio-political, religious, and environmental history of 13th-century Kalinga without letters. The unparalleled royal military strength is proven through the thousands of elephants and giant horses. The political majesty of the 'Gajapati' rulers is symbolized by these creations, while Arabian war horses and African giraffes showcase the global maritime trade network. The Kalinga stone carvers possessed exceptional anatomical and ethological knowledge regarding animal muscles, bone structures, expressions, and movements, which deeply astonishes modern archaeozoologists. Ultimately, the Konark Sun Temple can be undoubtedly termed an invaluable 'archaeological encyclopedia' left for modern researchers to study the animal world of medieval India, environmental balance, and the human-animal relationship of that time.

Keywords - Animal sculptures, Archaeozoology, Hindu architecture, Konark Sun Temple, Orissa art tradition, Symbolism

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