

Ethno-Archaeology in Odisha with Reference to Tribal Living Tradition and Material Culture An Analytical Review

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Abstract

This paper explores the ethno-archaeological research in Odisha. It reviews how living traditions among tribal communities can help interpret the region's rich archaeological past. Odisha, with its diverse tribal population and historically significant archaeological sites, offers a unique opportunity to study cultural continuity through material culture, rituals, and settlement patterns. The paper examines how some of the present-day practices of some tribal communities—such as pottery making, megalithic memorials, funerary customs, and spatial organisation—can be used to understand similar elements in archaeological contexts. Drawing upon secondary sources and research papers, the discussion highlights the relevance of tribal material culture in interpreting prehistoric and early historic remains. It also addresses the myriad challenges such as using ethnographic analogies, cultural change, external influence, and methodological limitations. Through critical analysis, the study shows that Odisha plays a key role in shaping Indian ethno-archaeological discourse. Lastly, it concludes that the interaction between local traditions and archaeological interpretation not only deepens our understanding of the past but also supports the preservation of indigenous knowledge and cultural heritage in the present scenario.

Keywords: Ethno-archaeology, Odisha, Tribal Material Culture, Living Traditions, Megalithic and Burial Practices

10.0 Introduction

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Ethno-archaeology has emerged as a vital methodological and theoretical approach within archaeological anthropology. It aims to bridge the conceptual and interpretive gap between the material residues of the past and the behaviours that produced them. It draws heavily on ethnographic observations to construct plausible models of past human behaviour. Ethno-archaeology can be defined as “a study embodying a range of approaches to understand the relationship of material culture to culture as a whole, both in the living context and as it enters the archaeological record” (Friesem 2016: 146). According to David and Kramer (2001), ethno-archaeology is the ethnographic study of peoples for archaeological reasons to reconstruct the past. In practical terms, ethno-archaeology involves studying contemporary societies—particularly those with relatively traditional life ways—to better understand how human activities leave material traces. It allows archaeologists to decode the behavioural implications of artefact patterns, spatial organisation, tool use, and ritual practices found in archaeological contexts. Ethno-archaeology allows researchers to consider not just how something was made, but why it was made in a particular way, how it was used, and what symbolic or social meanings it carried.

The current paper intends to study from an ethno-archaeological perspective of Odisha based on existing literature and correlate it to some of the tribal practices reflecting the past. The present-day practices of some tribal communities like pottery making, megalithic memorials, funerary customs, etc. can be used to understand similar elements in archaeological contexts. It thus primarily aims at establishing the point that the past cultural activities are nothing but continuity through the present which is reflected by highlighting some tribal cultural practices. We also intend to bring to the notice that the interaction between local traditions and archaeological interpretation not only deepens our understanding of the past but also supports the preservation of indigenous knowledge and cultural heritage in the present scenario.

10.1 Literature Review

One of the most influential theoretical foundations of ethno-archaeology was laid by Lewis R. Binford (1978), emphasising the importance of the Middle Range Theory. It seeks to connect the static material record with the dynamic behaviours of human actors. To him, middle-range theory is the major instrument by which archaeologists can infer human behaviour from the archaeological record, based on the high-level cultural theories that provide overarching frameworks, and the empirical observations that yield raw data at the lower range. Ethno-archaeology is not just a descriptive tool then but an analytical one that helps formulate testable hypotheses about past human actions based on present observations. For instance, by documenting how specific burial practices are performed in tribal societies today, one can confidently interpret similar patterns found in megalithic cemeteries from the past. This methodological focus on behaviour-material linkage is what gives it enduring significance in archaeological interpretation, supported by the scholars like Longacre (1991), Kramer (1997) and Hodder (1982).

Longacre promoted ethnographic studies as essential to ceramic analysis, while Kramer emphasised the importance of understanding both technological and social dimensions of material production. Hodder’s contextual archaeology, though critical of simplistic analogies, still acknowledged the role of ethno-archaeology in deciphering

meaning embedded in material culture. Together, these underscore the fact that artefacts are not merely utilitarian remains; they are cultural expressions shaped by historical, ecological, and social forces. In the meantime, ethno-archaeology has undergone significant theoretical expansion, moving from its early processual foundations (scientific explanation) toward more interpretive, reflexive, and phenomenological approaches. Ethno-archaeology in this phase sought what was termed ‘actualistic studies’- that is, direct observations of contemporary activities that could be used to model ancient processes. Wylie (2002) took a critical stance on the use of the analogical approach, which is useful but risks creating a false sense of continuity if not critically examined. She argued that analogies have to be constructed through theoretically informed reasoning and not through resemblance. On the other hand, González-Ruibal (2003), in his work ‘Ethno-archaeology beyond analogy: a multitemporal view from Africa’, proposed that living traditions should be treated not as static survivals of the past but as dynamic manifestations of long-term cultural transformation. Lane (2015) further expanded the argument that technology should become an object of study as a practice that is culturally embedded, bringing together technical, cognitive, and symbolic dimensions. Tilley (1994) had argued that people experience material culture through their bodies, senses, and memories; thus, neither landscapes nor artefacts can be conceptualised solely as a functional residue. Instead, they form part of lived and meaningful worlds. Ingold (2000) has also furthered this perspective by putting forth the concept of ‘dwelling’, whereby human involvement with the environment is an active, embodied process rather than a static one.

In the present context, to support the argument, many pioneering studies were reviewed. These studies documented about the traditional practices in pottery production, funerary customs, and settlement organisation that reveal continuities with the region’s archaeological past. For instance, Mendaly (2019) explored living megalithic traditions among tribal communities in Sundargarh of Odisha, showing how contemporary mortuary rituals and stone-erecting customs can inform interpretations of Iron Age megaliths. Similarly, Hussain and Naik (2015) analysed ceramic production among potter communities in Bolangir district to understand the organisation of craft production systems—offering valuable insights into the processes of procurement, preparation, and shaping of clay that are often archaeologically invisible. These studies build a nuanced understanding of how certain technological choices, spatial patterns, or symbolic behaviours could have arisen and been sustained in similar cultural ecologies.

In Odisha, where the intersection between tribal life and archaeological landscapes remains vivid, the combined framework of behavioural and experiential approaches is particularly valuable. While earlier studies in the region primarily emphasised analogy, more recent scholarship encourages contextual and interpretive analysis. As Sinopoli (1991) noted, the use of ethnographic data in South Asia must remain critically reflexive, recognising how colonial histories, modernisation, and state interventions continuously reshape traditional practices. Such reflexivity ensures that ethno-archaeology does not treat indigenous communities as static models of the past but as active agents of cultural continuity and change. Therefore, an ideally balanced ethno-archaeology for Odisha needs to incorporate both the rigour of processualism and post-processual sensitivity. Such a synthesis allows for more robust and context-sensitive inference: not merely the reconstruction of past behaviour but also an appreciation of the way in which belief, emotion, and environmental relationships shape material traditions.

10.2 Odisha: An Archaeological Perspective

The historical trajectory of Odisha, formerly known as Kalinga, Utkala, or Odra in various periods, reveals a complex interplay of environmental richness, trade networks, and socio-political evolution. Situated on the eastern coast of India and bounded by the Bay of Bengal on one side and the Eastern Ghats on the other, the state has been both a cultural crucible and a strategic landmass, facilitating internal and external exchanges since antiquity. The region's archaeological significance is heightened by its wealth of prehistoric, proto-historic, and early historic sites, most of which remain underexplored in the broader narrative of Indian archaeology. Odisha's topography—characterised by undulating hills, wide river valleys (notably the Mahanadi, Brahmani, and Tel), and coastal plains—has historically nurtured human settlement and sustained agrarian as well as forest-based economies. These geographical factors contributed significantly to the early development of sedentary life.

From the Neolithic era to the Early Historic period, Odisha was host to multiple human population settlements that gradually developed into complex societies with distinctive cultural traits. In western Odisha, sites such as Hikudi, Khameswaripali, Kurumpadar, and Nuagarh have yielded ceramics and structural remains that span these periods, illustrating a continuum of cultural development (Pradhan 2006, Behera & Thakur 2016 and Hussain 2020). A detailed list of some excavated sites in the Middle Mahanadi valley is mentioned in table 10.1. Neolithic artefacts suggest the presence of early food-producing communities with a basic understanding of ceramic technology and settled life. Chalcolithic levels are noted for their characteristic Black-and-Red Ware, Black Burnished Ware, and Red Slipped Ware—styles that are consistent with broader trends across peninsular India. The Iron Age in Odisha spans from the latter half of the second millennium BC and the second half of the first millennium BC (Behera et al. 2019). It is marked by increasing specialisation in pottery and metallurgy, along with the emergence of fortified habitations and burial structures. This period also shows the first signs of social stratification and long-distance trade.

Table 10.1: Some excavated early historic sites in the Middle Mahanadi Valley, Odisha

Sl. No.	Site Name	Geo-coordinates	Cultural Sequence
	Badmal Asurgarh (Fortified)	Lat. 21° 07' 84" N Long. 84° 04' 42" E	Iron Age and Early Historic
	Kurumpadar/Tentulipali	Lat. 20° 51' 10.1" N Long. 84° 07' 03.9" E	Iron Age and Early Historic
	Kumersingha	Lat. 20° 51' 54" N Long. 84° 05' 00" E	Iron Age and Early Historic
	Manamunda Asurgarh (Fortified)	Lat. 20° 49' 59.90" N Long. 83° 56' 0.63" E	Iron Age and Early Historic
	Nuagarh Asurgarh	Lat. 20° 26' 4.87" N Long. 84° 05' 3" E	Iron Age and Early Historic
	Tarapoegarh (Fortified)	Lat. 21° 11' 38.01" N Long. 83° 33' 31.67" E	Iron Age and Early Historic
	Haldipali	Lat. 20° 49' 17.9" N Long. 83° 53' 23.4" E	Iron Age and Early Historic
	Bhutiapali	Lat. 20° 57' 02.3" N Long. 84° 05' 05.6" E	Early Historic
	Bhejidihi	Lat. 20° 57' 03" N Long. 84° 22' 17" E	Iron Age and Early Historic

	Kurmigudi	Lat. 20° 58' 35" N Long. 84° 18' 48" E	Iron Age and Early Historic
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Source: Hussain (2020)

Odisha's transition into the Early Historic period, roughly dated from the 3rd century BCE onward, is particularly significant. The material record of this phase points to a period of urbanisation, state formation, and increased engagement with trans-regional trade. This transition aligns with what scholars have termed the 'Second Urbanisation' of India—a phase characterised by the rise of fortified cities, structured settlements, coinage, craft specialisation, and the spread of writing systems. Sites such as Sishupalgarh, Radhanagar, Jaugada, Manamunda-Asurgarh, Narla-Asurgarh, Kharligarh, and Budhigarh represent early historic urbanism, each featuring planned layouts, defensive walls, gateways, and evidence of water management systems. Sisupalgarh, first excavated by B.B. Lal in 1949 and later by R.K. Mohanty and Monica Smith (2008), remains one of the most prominent early historic cities of India. These materials suggest that ancient Kalinga had connections with regions as far as the Roman Empire, Southeast Asia, and China. Inland river systems like the Mahanadi, Tel, and Indravati served as arteries of trade, linking coastal urban centres with hinterland resource zones (Mohanty & Smith 2008). While the settlements were typically located along smaller rivers or slightly away from major ones, the hinterland regions of Odisha, especially in Kalahandi, Balangir, and Boudh districts, were considered vital 'resource zones' by the coastal centres. These areas were rich in mineral deposits, especially iron and gemstones like garnet (Mohanty & Smith 2008).

10.3 Methodology

This paper was carried out for a review purpose. Accordingly, the content and materials were searched from secondary sources. Methodologically, we had a rigorous content analysis process and a survey of suitable literature on Odishan pre-history and discovery of some of the recent archaeological findings including Hodder (1982), Behera (2006 & 2013), Behera et al. (2019), Rice (1987), Kramer (1997), Hussain (2020), Hussain and Naik (2015), Behura (1978) and so on. The authors had a visit to the Kuliana archaeological site in the Mayurbhanj district and Sishupalgarh near the capital city of Bhubaneswar to get some ground observations. These first-hand observations were very handy while reading through the secondary sources. They could correlate the discussions and archaeological discoveries while drafting this research paper. Further, we had queried about the content from some of the pre-historians in the state. Based on the verbal interviews, we could correlate our thoughts that are reflected in the below mentioned discussions.

10.4 Findings

Odisha stands out as a region of exceptional relevance to ethno-archaeological inquiry. It is one of the few regions in the country where cultural traditions coexist with prehistoric material remnants in close spatial and social proximity. With a significant population of Scheduled Tribes (STs), many of whom continue to practise traditional crafts, rituals, and life ways, the state provides a living cultural laboratory for ethno-archaeologists. Currently, Odisha is home to 64 ST communities including 13 Particularly Vulnerable Tribal Groups

(PVTGs). They comprise of nearly 22.84% of the state's total population based on the last Census (2011). These communities, such as the Santals, Saoras, Kondhs, Mundas, Bondas, Gadabas, Juangs, and Ho etc. represent diverse linguistic and cultural lineages. Each tribe exhibits its own distinctive set of rituals, technologies, settlement patterns, and socio-economic structures. The material practices of present-day communities—such as pottery-making, use of stone tools, oral traditions, and burial rituals—can thus be used to develop middle-range models to interpret the archaeological record of the region. Ethno-archaeological studies in Odisha also help in highlighting the deeply embedded relationships between people, landscape, and materiality. Many tribal rituals in the state are intimately tied to particular places—sacred groves, stones, water bodies—which mirror the spatial organisation found in many ancient sites. The symbolic role of material culture in rites of passage, seasonal festivals, and ancestor worship among tribal groups offers a fertile ground for interpreting archaeological features such as stone circles, cairns, or platform altars.

10.4.1 Tribal Living Traditions and Material Cultures: Ethno-archaeological Correlates of Mendaly's work

Living traditions among the tribal communities encompass a range of socio-religious and economic behaviours that often mirror archaeological patterns. In Sundargarh district, the Mundas preserve a distinctive megalithic tradition involving the erection of memorial stones, cairns, and stone circles as part of funerary rituals. Mendaly (2019) in his study of Munda settlements finds that these practices are not simply symbolic but are integral to the way death; memory, lineage, and territoriality are conceived in tribal society. The Mundas, for instance, practise elaborate post-mortem ceremonies that include the Jagen ritual (a purification ceremony), followed by the erection of a memorial pillar in honour of the deceased. The community collectively selects a stone from nearby hills, often through an arduous transportation process using bullock carts or palanquins. These stones are then erected in either burial grounds or along pathways—depending on the cause of death. Larger stones and elaborate ceremonies are typically reserved for individuals of high social or economic standing. According to Elwin (1945), such funerary traditions among tribes like the Saora and Kharia also involved symbolic disposal of possessions to prevent the spirit from returning. The Kisans practise the creation of effigies that are floated in rivers during the final mourning rites.

These customs echo the Iron Age megalithic traditions found across India, where burials were accompanied by grave goods and marked by menhirs (single tall standing stone) or dolmens, suggesting a functional and cultural continuity. These living traditions allow for informed speculation on their social and ritual significance. Further, the tribal worldview in Odisha is deeply animistic and tied to local ecology. Spirits inhabit rivers, hills, forests, and stones. This belief system manifests materially in the use of carved wooden totems, ritual stones, and sacred groves. These sacred elements are often spatially organised in a village landscape in ways that resemble archaeological site planning. The *Parha* system, for instance, among the Mundas and Oraons, as described by Mendaly (2019), includes centralised ritual spaces where village elders congregate and perform community-wide rituals – indicating the ceremonial centres found in early historic and proto-historic settlements. Archaeologists like Sinopoli (1991) emphasised that such organisation reveals the interplay between ideology and material space, imbued with deep cosmological meaning.

10.4.2 Material Culture and Craft Practices: Ethno-archaeological Correlates of Hussain and Naik

The living tradition and material culture of tribal Odisha is not limited to funerary practices. Day-to-day life involves the use of pottery, wooden and bamboo implements, textiles, metal tools, and architectural materials that align with known archaeological materials. A notable example is the earthenware pottery tradition in Bolangir district. In their ethno-archaeological study, Hussain and Naik (2015) analyse the entire process of ceramic production in Loisingha block—from clay procurement, mixing and tempering, to shaping, firing, and distribution. Pottery forms such as *Handi* (a round cooking pot), *Mathia* (a cylindrical water carrying vessel), and ceremonial vessels are produced in seasonal cycles. These vessels exhibit continuity in form and function with ceramic assemblages found in Neolithic and Iron Age contexts. This correlation between present-day pottery and archaeological artefacts is vital for reconstructing craft economies. Scholars like Kramer (1997) and Rice (1987) argue that understanding how contemporary potters organise production, distribute goods, and respond to demand can illuminate similar patterns in ancient societies. The communal aspect of production and its ritualization finds parallels in prehistoric contexts where large-scale pottery kilns and uniform ceramic types suggest centralised craft production. Furthermore, pottery in tribal Odisha serves both utilitarian and ritual functions. Specific forms are used for domestic cooking, water storage, fermentation of rice beer, and ritual offerings. The symbolic use of pots in marriage ceremonies, ancestor worship, and seasonal festivals reflects an embedded cultural significance that cannot be understood by form alone. Stark (2003) argues for the necessity of combining form-function analysis with cultural context, a lesson particularly relevant in regions like Odisha where artefacts are part of lived ritual systems.

10.4.3 Architecture, Settlement Patterns, and Landscape Use: Ethno-archaeological Correlates of Parkin

The spatial organisation of tribal settlements in Odisha offers another area of ethno-archaeological relevance. Tribal houses, often built with mud walls and thatched roofs, are arranged around central courtyards or ritual centres. The use of raised platforms, sacred hearths, and granaries reveals a conscious engagement with environmental factors such as rainfall, topography, and soil fertility. These architectural choices allow for a more nuanced reconstruction of prehistoric settlements. Among the Munda and Saora villages, ceremonial landscapes are carefully maintained. As Parkin (1992) suggests ritual space is not merely symbolic rather encoded with bodily and social directives. Sacred groves, ancestral stones, and ritual paths are arranged in culturally significant ways. The *Pahan* (priest) and village headman perform rituals at these sites to ensure fertility, rain, and community well-being. This layering of social, spiritual, and material elements in space reflects what Hodder (1982) calls the ‘social logic of space’—an idea that aids archaeologists in interpreting settlement layouts not merely as functional entities but as symbolic systems. The link between subsistence strategy and site formation is well captured in ethno-archaeological studies and can be used to test hypotheses about ancient economic organisation in the upland regions of Odisha.

10.5 Discussions

Ethno-archaeological studies help us understand how some of the cultural practices we see today can give us clues about the past. When we look at the material culture, such as pottery, tools, or burial practices of tribal communities, we are not only seeing how they live now but also finding ways to understand how people lived thousands of years ago. This is especially helpful in geography like Odisha, where many tribal groups still follow traditional ways of life that have continued for generations. These living traditions are important because they show us patterns that may also have existed in ancient times. By studying tribal rituals and daily practices, we can make educated guesses about what some archaeological remains might mean. For example, from the Munda practice of erecting stone memorials for their ancestors, we can relate that to the megalithic structures. These practices help us think about how ancient people might have honoured their dead and what kinds of social or spiritual beliefs they may have had. We learn that these stones were not just random structures—they were part of a bigger cultural system.

The correlation between tribal material culture and archaeological assemblages in the state has been emphasised by several scholars. Behura (1978) was among the first to document the pottery practices of peasant communities in Odisha and argued for their interpretive potential in prehistoric studies. Similarly, Behera (2006 & 2013) has shown how Iron Age and Early Historic ceramics found at sites like Badmal-Asurgarh resemble present-day rural pottery in form and fabric, suggesting long-term continuity with occasional technological innovation. From a methodological perspective, ethno-archaeology in Odisha operates within the framework of analogy and inference—an approach both powerful and limited. As Sinopoli (1991) warns, analogies must be used critically, accounting for socio-historical differences and acknowledging the impact of modernity, state policy, and market economy on tribal life ways. Still, when handled cautiously, such studies enrich archaeological interpretation by grounding it in observable human behaviour. Ethno-archaeological research in Odisha also has a de-colonial potential. It valorises indigenous knowledge systems and counters narratives that portray tribal cultures as static or primitive. Instead, these communities are shown to be dynamic, adaptive, and historically grounded. Their rituals, crafts, and material practices are not relics but living archives—repositories of historical memory and cultural innovation.

One of the most valuable things we learn from tribal communities based on the literature is the importance they attach to the local material objects in their rituals and daily lives. Items like clay pots, metal tools, and even the layout of houses can hold symbolic meanings. For example, the pottery used in festivals or funerals often has specific shapes or designs and is used only in certain ceremonies. When we find similar shapes in ancient pottery, we can start to imagine how they may have been used—not just for cooking or storage, but also in religious or social events. Also, looking at how tribal communities organise their villages gives us ideas about how ancient settlements might have been arranged. Often, we find a central area for rituals, separate areas for different families, and places for storage or grain. These patterns can be compared to the layouts found in excavated early settlements like Sisupalgarh. While we cannot say they are exactly the same, they do help us build models for how ancient people may have lived and interacted with their environment.

In many parts of India, traditional ways of life have changed a lot because of urbanisation and modernisation. But many tribal communities still practise age-old customs in the state. This makes Odisha a special case where archaeologists can still find strong

examples of how traditions connect with ancient cultural forms. The state becomes a kind of “living museum”, not in a romantic or static way, but in the sense that traditions are still practised and passed down, even while adapting to new changes. Another interesting contribution from Odisha is the way it challenges the usual division between tribal and civilised or urban societies. Often in the Indian history, tribal communities are seen as being outside of mainstream historical developments. But when we look at the trade networks, settlement patterns, and ritual systems, we see that these communities were likely connected to bigger social and economic systems. For example, the presence of foreign objects like Roman amphorae in Odisha’s ancient port sites suggests that the region was involved in international trade. This means tribal groups may not have been isolated; they may have played a role in these exchanges. Ethno-archaeological studies help us question simple categories and see that cultural boundaries were more flexible.

Ethno-archaeology also helps us understand the importance of how people relate to the land and nature. In tribal Odisha, land is not just a place to live or farm—it is sacred. Rivers, hills, stones, and forests are seen as living beings. Rituals are performed to protect or thank nature. This perspective is very useful when interpreting archaeological sites that seem to have a special connection to the landscape. However, while making these connections, we must be careful. Today’s traditions are not always the same as ancient ones. People adapt, change, and borrow from other cultures over time. Still, even with these changes, many deep-rooted ideas and practices continue in new forms. Ethno-archaeology allows us to study these continuities and transformations together. It shows us that while culture is always changing, it often keeps a link to the past. Also, this approach gives us more than just academic knowledge. It helps preserve indigenous knowledge and gives voice to communities who are often left out of history books. Tribal people in Odisha are not just sources of information—they are keepers of history. When we study their traditions with respect and cooperation, we are not only learning about the past but also helping protect cultural heritage.

10.6 Contemporary Challenges in Ethno-archaeological Interpretation in Odisha

One of the primary challenges in ethno-archaeological interpretation is the assumption of cultural continuity. While certain practices among tribal communities may appear analogous to archaeological findings, it's crucial to recognise that cultures are dynamic and subject to change over time. For instance, the Bonda tribe, known for their distinct cultural practices, have undergone significant transformations due to external influences and internal adaptations. The Bonda Development Agency, established in 1977, aimed to integrate the Bondas into mainstream society, leading to shifts in their traditional practices and belief systems. Such transformations underscore the difficulty in establishing direct analogies between contemporary practices and ancient behaviours. The risk lies in oversimplifying complex cultural evolutions and projecting present-day observations onto the past without accounting for historical changes.

Second is the intrusion of modernity and external interventions that has significantly altered the traditional lifestyles of many tribal communities in Odisha. For example, the Dongria Kondh tribe has faced challenges due to industrialisation and land acquisition projects, impacting their traditional land-use patterns and rituals. These external influences complicate ethno-archaeological interpretations, as the contemporary practices observed may be hybridised or entirely new, lacking direct continuity with ancient traditions. Researchers

need to exercise caution to differentiate between long-standing traditions and recent adaptations.

Third, ethno-archaeological research involves close interaction with indigenous communities. Ethical considerations, including informed consent, respect for cultural sensitivities, and equitable benefit-sharing, are paramount. Some tribal communities have expressed apprehension towards researchers, fearing misrepresentation or exploitation. For instance, tribal are hesitant to discuss hunting practices, fearing legal repercussions. Such ethical challenges necessitate a participatory approach, where communities are active collaborators rather than mere subjects. Building trust and ensuring that research outcomes benefit the communities involved are essential for ethical and effective ethno-archaeological studies.

Language plays a crucial role in understanding cultural practices and their meanings. Many tribal languages are endangered, with younger generations shifting towards dominant languages like state language of Odia. The Bonda language, for instance, faces extinction threats due to assimilation pressures. The loss of indigenous languages hampers the transmission of traditional knowledge, rituals, and oral histories, which are invaluable for ethno-archaeological interpretations. Without linguistic proficiency, researchers may misinterpret practices or overlook nuanced cultural meanings embedded in language.

The most crucial factor is the environmental ones, including deforestation, climate change, and land-use alterations etc., have reshaped the landscapes inhabited by tribal communities. In Western Odisha, massive industrialisation has led to significant forest cover reduction, affecting the traditional livelihoods and settlement patterns of tribes like the Paudi Bhuyans. These environmental changes disrupt the continuity of material culture and spatial organisation, complicating efforts to draw parallels between current practices and archaeological remains. Researchers must account for ecological transformations when interpreting settlement patterns and resource utilisation.

10.7 Conclusion

The ethno-archaeological study of Odisha highlights the deep and meaningful connections between living tribal traditions and the archaeological past. Through the careful observation of present-day cultural practices—such as funerary rituals, craft production, village organisation, and material usage—we are able to better understand how ancient people may have lived, thought, and interacted with their environment. Odisha, with its unique diversity of tribal communities and its rich archaeological landscape, offers a valuable opportunity to explore these connections in a way that is both insightful and respectful. What makes Odisha truly special in the field of ethno-archaeology is the way many of its communities continue to preserve and practise traditions that are deeply rooted in history. These living traditions are not just leftovers from the past—they are active, meaningful systems that continue to evolve while maintaining links to older ways of life. By studying these practices, we gain a richer picture of the past that goes beyond just artefacts and ruins. We also begin to understand the beliefs, values, and relationships that gave shape to ancient societies. This review has shown that ethno-archaeology in Odisha contributes not only to local understanding but also to the broader field of Indian archaeology. It reminds us that indigenous communities are not separate from history—they are part of it. Their traditions can teach us about cultural

continuity, adaptation, and resilience. At the same time, this approach helps protect intangible cultural heritage by documenting and valuing traditional knowledge. In a time when many traditional societies face the pressures of change and modernisation, ethno-archaeological studies including this paper are important. They provide a way to learn from the past while also supporting the cultural identity of present communities. Odisha's tribal knowledge systems, when studied in ethno-archaeological perspective with care and respect, will continue to offer powerful insights into our shared human history. To conclude, ethno-archaeology not only enriches archaeology as a discipline but also strengthens our appreciation for the cultural diversity that still exists in the world today.

Declaration

Both the authors contribute equally for data collection, content analysis and drafting of the paper.

Conflict of interest

The authors declare no conflict of interests.

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