

# Insights on Socio-Economic Structure, Culture, Religious Beliefs, Philosophy, Mythology, Custom Astrology and Traditions Practices of Lothal Town.

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## ABSTRACT

Lothal, a prominent city of the Indus Valley Civilization (IVC), provides valuable insights into the social, cultural, and religious aspects of this ancient civilization. While direct evidence like written texts is still undeciphered, archaeological findings at Lothal and other Harappan sites allow us to infer a great deal. Understanding the religious, philosophical, and mythological aspects of Lothal, like the broader Indus Valley Civilization (IVC)

**Keywords:** Socio-economic, Lothal, Indus Valley Civilization, Urban Planning, Maritime Trade, Religious Beliefs, Fire Worship, Mother Goddess, Pashupati, Burial Practices, Astronomy, Celestial Navigation, Cultural Traditions

## INTRODUCTION

Lothal, as an integral part of the Indus Valley Civilization, showcases a sophisticated society with advanced urban planning, a thriving economy based on trade and specialized crafts, and a religious life seemingly centered around fertility, nature worship, and early forms of deities. Lothal's culture was a remarkable blend of advanced urban living, economic dynamism driven by maritime trade and skilled craftsmanship, and a pragmatic yet spiritually connected worldview. It stands as a powerful testament to the ingenuity and complexity of the Indus Valley Civilization, offering enduring lessons in urban planning, sustainable development, and global trade.

### Social Structure and Culture of Lothal

- **Urban Planning and Organization:** Lothal exhibits a highly organized and planned urban layout, typical of Harappan cities. It was divided into an "upper town" or "acropolis" where a ruling class or priests likely resided, and a "lower town" for common people. Houses were made of mud bricks or baked bricks, often with courtyards, bathrooms, and an efficient drainage system. This systematic planning suggests a well-structured society with some form of central authority
- **Economic Hub:** Lothal was a thriving trade and industrial centre. Its strategic location near the Sabarmati River and its famous dockyard facilitated extensive maritime trade with regions as far as Mesopotamia, Egypt, and Persia. This economic prosperity likely influenced its social structure, with merchants and skilled artisans playing significant roles

### Religious Practices and Beliefs (Based on Archaeological Evidence from Lothal and IVC in general)

- **Fire Altars and Fire Worship:** Lothal provides strong evidence for fire worship. Several structures identified as "fire altars" have been found in the city, both in public areas (possibly for communal rituals) and private houses. The discovery of charred ashes, pottery, and bovine remains in these altars suggests a practice of ritualistic sacrifices, possibly of animals or cattle. Some scholars even suggest practices akin to the ancient Vedic *Gavamayana sacrifice*. This indicates the worship of a fire deity or the use of fire in important ceremonies.

- **Mother Goddess Worship (Possible Fertility Cults):** While less prominent at Lothal compared to sites like Mohenjo-Daro, the general IVC evidence includes numerous terracotta figurines of what are often interpreted as "Mother Goddesses." These typically emphasize fertility features, suggesting a widespread belief in a divine female principle associated with procreation, abundance, and the earth.
- **Proto-Shiva / Pashupati Figure:** Many seals from various IVC sites, including Lothal, depict a male figure seated in a yogic posture, sometimes horned and surrounded by animals. This figure is widely interpreted as a "proto-Shiva" or "Pashupati" (Lord of Animals) by many scholars, suggesting an early form of a deity resembling the later Hindu god Shiva. This points towards an emphasis on the control over animals and possibly meditative or yogic practices.
- **Animal Veneration:** Animals play a significant role on Harappan seals and artifacts. Besides the "Pashupati" figure, various animals like bulls (especially the unicorn-like creature), elephants, rhinoceroses, tigers, and water buffaloes are frequently depicted. These likely held symbolic, sacred, or totemic significance. The bull, in particular, may have been a powerful symbol.
- **Tree Worship:** Some seals depict trees, notably the Pipal (Sacred Fig), sometimes with a deity or a worshipper associated with them. This suggests a form of tree veneration, possibly belief in a "tree of life" or sacred groves.
- **Fire Altars:** Fire altars have been found at Lothal (both rectangular and circular), indicating the practice of fire rituals, possibly involving animal sacrifices (as suggested by bovine bones and antlers found at other Harappan sites like Kalibangan). The association of fire altars with wells suggests ritual bathing before worship.
- **Ritual Bathing:** While Lothal doesn't have a "Great Bath" like Mohenjo-Daro, the presence of well-planned drainage systems and private bathing platforms in houses suggests a strong emphasis on hygiene and possibly ritualistic purification through water, a concept prevalent in many ancient and later Indian religions.
- **Absence of Monumental Temples:** Unlike other ancient civilizations, the Indus Valley Civilization, including Lothal, lacks grand temple structures. This leads some researchers to believe that their religion might have been decentralized, focusing on domestic or community rituals rather than large-scale public worship in dedicated temples.
- **Amulets and Talismans:** The discovery of amulets and symbols like the swastika and cross suggests beliefs in good luck and protection from evil.
- **Burial Practices:** Lothal exhibits varied burial practices.
  - **Single Burials:** The most common form, with individuals interred in pits.
  - **Twin Burials:** The discovery of pairs of skeletons (sometimes in what appear to be single graves) has led to speculation about practices like 'sati' or ritualistic sacrifice, but there is *no conclusive evidence* for such interpretations. It's more likely to be a consequence of simultaneous death, perhaps from an epidemic or accident.
  - **Pot Burials:** Some burials involved placing remains in large pots. The presence of grave goods (pottery, ornaments) indicates a belief in some form of afterlife or a journey of the deceased.

## PHILOSOPHY AND MYTHOLOGY

Direct evidence of a defined philosophical system or elaborate mythology, as found in later Vedic traditions, is scarce due to the undeciphered script. However, inferences can be made:

- **Harmony with Nature:** The prevalence of animal and tree motifs in their religious practices suggests a close connection to and respect for nature. Their sustainable urban planning, including efficient drainage and water management, could also reflect a philosophy of living in harmony with their environment.
- **Order and Structure:** The meticulous urban planning, standardized weights and measures, and evidence of a well-organized society suggest an emphasis on order, structure, and perhaps a pragmatic approach to life.
- **Local Mythology (Vanuvatimata):** There's a local tradition at Lothal regarding the worship of "Vanuvatimata," a sea-goddess. Interestingly, the original seat of this goddess was believed to be the warehouse mound overlooking the dock, invoked to protect sailors. This suggests a localized mythology related to their maritime activities
- **Emphasis on Order and Harmony:** The meticulous urban planning, standardized weights and measures, and efficient drainage systems across IVC sites, including Lothal, point to a societal value for order, control, and collective well-being. This might suggest a pragmatic philosophy focused on societal stability and efficient living.
- **Peaceful Coexistence:** The relative absence of military infrastructure and weaponry, coupled with extensive trade, suggests a society that prioritized trade and diplomacy over conquest. This hints at a non-militant philosophical outlook, at least in comparison to contemporary civilizations.
- **Environmental Awareness:** The design of Lothal to manage floods and its sustainable resource utilization (e.g., careful use of timber, organized craft production) might reflect a philosophy of living in harmony with nature and adapting to environmental challenges.

## Mythology

Direct mythology, in terms of narrative stories about gods, heroes, or creation, is unknown due to the undeciphered script. However, the iconography on seals and artifacts gives us clues about beings and concepts that might have been part of their mythology:

- **Composite Animals/Mythical Creatures:** Seals depict fantastic or composite animals (e.g., a bull-elephant, a bull-man). These likely represented mythical beings, protective spirits, or deities, similar to mythical creatures in other ancient mythologies.
- **"Unicorn" Figure:** The most common motif on Harappan seals is the enigmatic "unicorn" (a single-horned bovine creature). Its pervasive presence suggests it held immense symbolic and possibly mythological significance, perhaps as a sacred animal, a symbol of purity, or even a representation of a deity.
- **"Master of Animals" Motif:** The "Pashupati" seal often evokes the ancient Near Eastern "Master of Animals" motif, where a powerful figure controls wild beasts. This suggests a mythological archetype related to dominion over nature.

**Sea Goddess (Local Tradition):** Interestingly, a local tradition recorded by the original excavator S.R. Rao mentions the worship of **Vanuvatimata**, a sea-goddess, at Lothal, whose sacred stones were located near the warehouse overlooking the dock. While this is a later tradition, it might be a distant echo of ancient beliefs surrounding a protector deity for sailors and traders, given Lothal's maritime nature. This suggests a potential localized mythology linked to their primary economic activity

## Customs and Traditions

- **Burial Practices:** At Lothal, burial pits were sometimes lined with burnt bricks, indicating the use of coffins. "Twin burials" (pairs of skeletons in a single grave) have also been found, though there's no clear evidence of Sati.

- **Trade and Exchange:** Their extensive trade networks with distant civilizations suggest established customs and protocols for commerce and cultural exchange.
- **Artistic Traditions:** The consistent artistic styles found in pottery, seals, and figurines across Harappan sites, including Lothal, point to shared artistic traditions and aesthetic values.
- **Hygiene and Sanitation:** The advanced drainage systems indicate a strong emphasis on public health and sanitation as a customary practice.

### Evidence of Astronomical Knowledge and its Applications at Lothal (and IVC)

- **Urban Planning and Orientation:** Harappan cities, including Lothal, exhibit remarkable precision in their urban planning, with streets often oriented along cardinal directions (North-South, East-West). This level of precision requires sophisticated astronomical observations to determine true north and establish alignments. The use of a gnomon (a simple astronomical instrument to measure shadow lengths) would have been crucial for this.
- **Calendrical Systems:** An advanced agricultural and trading society like Lothal would have absolutely required a reliable calendar for:
  - **Agricultural cycles:** Knowing the seasons for planting and harvesting.
  - **Trade seasons:** Understanding favorable periods for maritime voyages (monsoon patterns, etc.).
  - **Religious rituals:** Timing festivals and ceremonies.
- While no explicit calendar texts from Lothal have been found, the need for such a system is undeniable. Later Vedic texts (like the Vedanga Jyotisha, though post-IVC) demonstrate a sophisticated lunisolar calendar with knowledge of nakshatras (lunar mansions), solar and lunar months, and intercalary periods to reconcile them. It's plausible that the roots of these practices lie in the IVC.
- **Weights and Measures:** The highly standardized system of weights and measures found at Lothal (including a precise ivory scale) suggests a society that valued accuracy and precision. This mindset would naturally extend to observing and measuring celestial movements.
- **Symbolism on Seals and Pottery:** Some scholars have proposed interpretations of certain motifs on Harappan seals and pottery as representing celestial bodies or astronomical concepts. For example, the "fish" motif, or *meen* in many Dravidian languages, also means "star" in Proto-Dravidian, suggesting a possible link between aquatic life (relevant to a port city like Lothal) and celestial bodies, potentially indicating astral divinities.
- **Absence of Monumental Observatories at Lothal (Contrast with Dholavira):** While Lothal itself doesn't have a definitive "astronomical observatory" structure like the possible one identified at Dholavira (another major IVC site in Gujarat with circular structures possibly used for observation of the North Pole and zenith stars), it doesn't negate their astronomical knowledge. Simple methods like gnomons and observation from rooftops could have been employed.
- **Practical Necessity for Navigation:** As a major port and trading hub, Lothal's inhabitants would have relied heavily on celestial navigation for their voyages across the Arabian Sea. Knowledge of star patterns, the movement of the sun, and possibly the moon would have been essential for long-distance travel.

### Lothal Astronomical Knowledge Using as Navigational Tools

Lothal possessing the astronomical knowledge and ingenuity required for sophisticated celestial navigation, enabling their crucial role in the ancient maritime trade networks. The ongoing research and the development of

the National Maritime Heritage Complex at Lothal aim to further illuminate these aspects of their impressive civilization.

### Celestial Navigation Would Have Worked (Inferred)

Given the available evidence and the practices of other ancient maritime civilizations, the people of Lothal likely used:

- **Sun Observation:**
  - **Determining Latitude:** By measuring the maximum altitude of the sun at noon, sailors could estimate their latitude, especially when sailing north or south.
  - **Timekeeping:** Observing the sun's position throughout the day would have been crucial for estimating time.
- **Star Observation:**
  - **Direction Finding:** Navigating by Polaris (the North Star) or other prominent constellations (like the Big Dipper, which was possibly known as "Riksha" by the Harappans, meaning "Bear") would provide a reliable sense of direction at night.
  - **Latitude Estimation:** Observing the altitude of specific stars at their culmination (highest point) could also help determine latitude.
  - **Timekeeping:** The movement of constellations across the night sky provided a natural clock.
- **Lunar Observation:** The moon's phases and its position relative to stars could have been used for calendrical purposes and possibly for rough time and direction estimations.
- **"Dead Reckoning":** This involves estimating position based on speed, direction, and elapsed time since the last known position. Celestial observations would have been essential for recalibrating these estimates.

Lothal, as a major port city of the Indus Valley Civilization (IVC) with extensive maritime trade connections, undoubtedly relied on sophisticated navigation techniques. While we lack direct written accounts due to the undeciphered script, archaeological evidence and logical inferences strongly suggest the use of **celestial navigation**

### The Need for Navigation in a Maritime Hub of Lothal

**Extensive Trade Routes:** Lothal was a key player in trade with Mesopotamia, the Persian Gulf, and possibly even Egypt. Such long-distance voyages across the Arabian Sea would have required reliable navigation beyond simple coastal hugging.

**Deep Sea Voyages:** While coastal navigation is possible, reaching distant lands efficiently would have necessitated venturing into the open sea, where land references disappear, making celestial guidance indispensable.

**Monsoon Winds:** The Indian Ocean experiences distinct monsoon seasons. Understanding these wind patterns and using them to their advantage for sailing would have required precise timing, which itself relies on calendrical knowledge derived from astronomical observations.

**Urban Planning and Alignment:** The precise north-south and east-west orientation of streets and structures in Harappan cities like Lothal indicates a strong understanding of cardinal directions, which is derived from observing the sun's path. This foundational astronomical knowledge is a prerequisite for celestial navigation.

**Standardized Weights and Measures:** The discovery of highly accurate ivory scales and standardized weights at Lothal speaks to a culture that valued precision and measurement. This scientific approach would naturally extend to observing and quantifying celestial movements.

**The "Lothal Compass":** A notable find at Lothal is a shell object with slits, which some archaeologists, like S.R. Rao, have interpreted as a rudimentary compass or an instrument for measuring angles. If used to measure the position of stars or the sun above the horizon, it could have served a function similar to an early sextant, allowing sailors to determine their latitude

**"Stitched Ships":** The discovery of remains of a "stitched ship" at Lothal indicates advanced shipbuilding technology and an understanding of seaworthy vessels capable of long voyages. Such vessels would have demanded effective navigation.

**Knowledge of Tides and Hydraulics:** The design of Lothal's famous dockyard, with its sluice gates and channels, demonstrates a sophisticated understanding of tidal movements and hydraulics. This practical knowledge of natural forces further highlights their observational and engineering prowess, which would have extended to understanding celestial influences on tides.

**Possible Astral Symbolism:** While debated, some scholars interpret certain motifs on Harappan seals (e.g., "fish" also meaning "star" in Proto-Dravidian) as evidence of astral divinities or astronomical concepts, suggesting a cultural interest in the cosmos beyond mere practical observation.

## CONCLUSION

Lothal's religious philosophy and mythology remain largely a mystery, archaeological findings provide tantalizing glimpses into a complex belief system characterized by fire worship, reverence for nature and animals, possibly a Mother Goddess cult, and a proto-Shiva deity, all woven into the fabric of a highly organized and commercially oriented society. The ongoing decipherment efforts for the Indus script hold the key to unlocking these ancient secrets.

The culture of Lothal, a prominent city of the Indus Valley Civilization (IVC), offers a compelling glimpse into the sophisticated life of one of the world's earliest urban societies. While direct interpretation is limited by the undeciphered Harappan script, archaeological discoveries paint a rich picture.

**In conclusion, the culture of Lothal was characterized by:**

- **Advanced Urbanism and Organization:** Exhibiting hallmark Harappan town planning, Lothal was a meticulously designed city with a clear division between an "upper town" (acropolis) and a "lower town." Its well-laid grid streets, standardized brick houses, and sophisticated drainage systems underscore a highly organized and disciplined society with a strong municipal administration focused on public health and order.
- **Thriving Economic Prosperity:** As a bustling port city with the world's earliest known dockyard, Lothal was a vital center for trade and industry. Its economy was driven by specialized crafts, particularly bead-making (with exquisite carnelian and other semi-precious stone beads exported widely), metallurgy (copper and bronze), and pottery. The use of standardized weights and seals with undeciphered script points to a well-regulated and far-reaching commercial network with connections as far as Mesopotamia and the Persian Gulf.
- **Practical Innovation and Engineering Acumen:** The construction of the dockyard itself, with its understanding of hydraulics and tidal movements, is a testament to the engineering prowess of the Lothal inhabitants. Their accurate measuring instruments, like the ivory scale, further highlight their scientific approach and precision.
- **Inferred Religious Beliefs and Spiritual Connection to Nature:** While without grand temple structures, the presence of fire altars, terracotta figurines of a Mother Goddess, and animal motifs on

seals suggests a religion rooted in fertility, fire rituals, and reverence for nature and animals. The concept of purification, possibly through water, also seems significant given their elaborate bathing facilities.

- **Artistic Expression and Shared Traditions:** The consistent artistic styles found in pottery, figurines, and seals across Lothal and other Harappan sites indicate shared cultural and aesthetic values, reflecting a vibrant artistic tradition.
- **Resilience and Adaptation:** Despite facing recurrent natural disasters like floods, Lothal demonstrated resilience, rebuilding and adapting, though ultimately succumbing to environmental changes that affected the broader IVC.

### In Conclusion on Customs of Lothal

The customs of Lothal were not merely arbitrary habits but foundational elements that underpinned its success as a major ancient urban centre. They fostered a society that was organized, economically vibrant, spiritually engaged with its environment, and remarkably resilient, leaving behind a legacy of sophisticated practices that profoundly shaped their daily lives and interactions.

The customs of Lothal were intrinsically linked to its identity as a sophisticated, urbanized, and mercantile society. They reflected a strong emphasis on:

- **Order and Regulation:** The meticulously planned urban layout, standardized brick sizes, and precise weights and measures found throughout Lothal point to customs rooted in order, consistency, and regulation. This suggests a societal structure that valued communal organization, efficiency, and fairness, particularly in trade.
- **Hygiene and Sanitation:** The highly advanced drainage systems, private bathrooms in houses, and access to wells indicate a cultural custom of prioritizing public health and personal hygiene. This was not just practical but likely held social and possibly ritualistic significance, emphasizing cleanliness as a societal norm.
- **Specialized Craftsmanship and Trade Ethics:** The prevalence of specialized workshops for bead-making, metallurgy, and pottery suggests a custom of vocational training and intergenerational skill transfer. The existence of seals, often interpreted as symbols of ownership or authorization, implies established customs for commercial transactions, trust, and possibly contractual agreements in their extensive trade networks.
- **Ritualistic Practices and Beliefs:** While the exact nature of their religion remains undeciphered, the presence of fire altars, terracotta figurines, and animal motifs on seals points to established customs of worship and ritual. These likely included offerings, ceremonial bathing (given the water emphasis), and perhaps specific rites associated with fertility, protection, and the forces of nature, aligning with the "Mother Goddess" and "Pashupati" interpretations seen across the IVC.
- **Distinct Burial Practices:** The discovery of specific burial pits, sometimes lined with bricks, and the unique instance of "twin burials" (though the exact meaning is debated), indicates a customary approach to death and afterlife. These practices suggest a degree of reverence for the deceased and perhaps a belief system concerning the transition to another realm.
- **Adaptive Resilience:** The repeated evidence of rebuilding after devastating floods showcases a custom of communal resilience and adaptation. Rather than abandoning the site, the inhabitants consistently re-established their city, highlighting a strong collective will and a commitment to their established way of life despite environmental challenges.

**Conclusion on Mythology at Lothal:** Concluding on the mythology and traditions at Lothal requires navigating the inherent limitations of archaeological evidence when dealing with abstract concepts like belief

systems, especially with an undeciphered script. However, by piecing together various clues, we can form a coherent picture:

Lothal's mythology, though not directly articulated through deciphered texts, appears to be deeply rooted in **nature worship, fertility, and the vital forces underpinning their agricultural and maritime existence.**

- **Mother Goddess:** The consistent discovery of terracotta figurines strongly suggests the veneration of a Mother Goddess, symbolizing fertility, abundance, and the life-giving aspects of nature. This aligns with broader ancient traditions where the earth and female principle were seen as sources of creation.
- **Proto-Shiva/Pashupati:** While not directly found *at* Lothal, the "Pashupati" seal from other Harappan sites, depicting a horned figure surrounded by animals, is widely interpreted as an early form of Shiva, the "Lord of Animals." The presence of animal motifs on seals from Lothal suggests a similar reverence for animals, possibly indicating a connection to this wider Harappan deity or similar zoomorphic representations of divine power.
- **Animal Veneration:** Beyond the "Pashupati" figure, the frequent depiction of various animals (bulls, rhinoceros, tigers, elephants, and mythical "unicorns") on Lothal's seals points to a strong sense of animal veneration. These animals likely held symbolic, totemic, or divine significance, perhaps representing specific attributes or being associated with certain deities or natural forces.
- **Tree Worship:** Evidence, particularly the pipal tree, suggests a tradition of tree worship. This highlights a close relationship with the natural world and the belief that divine presence could reside in significant natural elements.
- **Local Sea Goddess (Vanuvatimata):** A compelling local tradition recorded by excavators speaks of "Vanuvatimata," a sea-goddess whose original shrine was believed to be the warehouse mound overlooking the dock. This indicates a localized mythology specifically tied to Lothal's maritime identity, where a deity was invoked to protect sailors and ensure safe voyages – a natural belief for a port city.

Essentially, Lothal's mythology was likely a blend of widespread Harappan themes (Mother Goddess, animal reverence) adapted with local nuances, particularly concerning its dependence on the sea.

### Conclusion on Traditions at Lothal

The traditions of Lothal were meticulously structured and deeply interwoven with their daily lives, urban planning, and economic activities, showcasing a highly organized and sophisticated society. These traditions included:

- **Rigorous Urban Planning and Engineering:** The tradition of highly systematic town planning, including a grid layout, standardized architecture, and an advanced drainage system, was a cornerstone of Lothal's existence. This reflects a deep-seated tradition of communal organization, public health, and forward-thinking infrastructure development.
- **Specialized Craft Production:** The remarkable consistency and quality of beads, pottery, and metal objects across Lothal and the wider IVC indicate a strong tradition of specialized craftsmanship. This included the passing down of skills and adherence to high standards, making Lothal a renowned industrial hub.
- **Standardized Commerce and Trade Protocols:** The use of precise weights and measures, alongside the widespread use of seals for identification and possibly accounting, points to well-established traditions of fair and organized trade. Their extensive international trade implies established customs for interaction and exchange with diverse cultures.
- **Ritualistic Purity and Fire Cults:** The presence of fire altars (both rectangular and circular) suggests a tradition of fire rituals, possibly involving offerings or sacrifices. The emphasis on water management

and bathing areas implies a tradition of purification rituals, likely integral to their religious and daily practices.

- **Specific Mortuary Practices:** The discovery of diverse burial methods, including brick-lined pits and unique "twin burials," indicates customary traditions surrounding death and the treatment of the deceased, suggesting specific beliefs about the afterlife.
- **Resilience and Community Adaptation:** A significant tradition observed at Lothal was its remarkable ability to rebuild and adapt after devastating floods. This points to a strong communal spirit and a tradition of collective action to overcome adversity, reinforcing their commitment to the settlement.

Lothal's mythology, though inferred, suggests a spiritual world deeply connected to nature and the necessities of life in a trading port. Its traditions, in contrast, are more concretely evidenced, painting a picture of a pragmatic, highly organized, and industrially advanced society that prioritized order, hygiene, skilled production, and communal resilience.

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