



## ANCIENT ASIA

Vol. 16, 2025, pp. 1-13  
© ARF India

URL: <https://ancient-asia-journal.com>  
<https://doi.org/10.47509/AA.2025.v16i.1>

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# Depiction of Pregnancy and Child Birth in Early Indian Rock Art: An Overview of Socio-Cultural Behaviour

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**Abstract:** Rock art is an expression of human behaviour in a symbolic way. It is an assemblage of signs and symbols which are not easy to explain as they appear. Some of the symbols are very common worldwide like the symbols of procreation or fertility. These are present in art from palaeolithic art to modern art. Present research paper is a small attempt to highlight and decode these depictions like pregnancy, child birth and other scenes and symbols related to the theme in light of human's biological, social and cultural behaviour. All kind of behaviour which are liable to bring individuals together, comes under social behaviour. Social behaviour is interaction of people to make the survival easy, it also includes cultural activities which can be seen as psychological support for survival. Reproduction is a part of human's biological behaviour but it also builds social behaviour among people. Different steps of this process (reproduction) need social cooperation and psychological support which creates the basic structure of the society. In the present paper, through the study of rock art we will try to find out how the social and cultural behaviour of people in the past managed the evolutionary or biological problems of reproduction.

**Keywords:** rock art, pregnancy, child birth, evolution, obstetrics dilemma, human behaviour

Published : 11 January 2025

### TO CITE THIS ARTICLE:

Neelam Singh and Sachin Kumar Tiwary (2025). Depiction of Pregnancy and Child Birth in Early Indian Rock Art: An Overview of Socio-Cultural Behaviour. *Ancient Asia*, 16: 1, pp. 1-13. <https://doi.org/10.47509/AA.2025.v16i01.1>

## Introduction

Rock art is symbolism of ideas and thought process of our ancestors. Some of the depictions in rock art are very common worldwide like the depictions and symbols of procreation or fertility from

prehistoric to historic times. Present research is an attempt to highlight and understand the depictions like pregnancy, child birth and other related signs and symbols in light of human's biological, social and cultural behaviour. Reproduction is a part of human's biological behavior, while social behaviour is interaction among the people to make their survival easy, and cultural behaviour can be seen as psychological support through performing rites and rituals. Reproduction related processes like copulation, pregnant women, delivery and child birth has been a repetitive narration in art and on the other hand symbols like female effigies with exaggerated fertility and nurturing parts, artefacts denoting phallus and vulva from different parts of the world indicate toward a common human behavior on earth (Singh & Tiwary 2024).

It is quite possible that human from different parts of the world had the same concerns about progeny. Those concerns might be infertility, still births, maternal death and other diseases related to this process. Birth and death are among the things which are out of human control. Though, in modern age we can control both things but still, not to a great extent. World Health Organization says that every day in 2020, approximately 800 women died during pregnancy and child birth (WHO, 2023), then we can imagine the unforeseen situation of the past. The situation is not same for the quadruped animals neither for our quadruped ancestors but the trouble began with the early members of our evolutionary lineage- *Homo erectus* or the bipedal human, who started to walk upright on two legs with enlarged brain size (Rosenberg and Trevathan 1996, Mitteroecker & Fischer 2024). This trait was bad for women because childbirth became a distressingly painful and resulted into "obstetric dilemma" (further explained in paper) (Shipman 2013, Rosenberg and Trevathan 1996, Trevathan 2017). Other problems might have been infertility and infant deaths due to many other reasons, which are still a problem in modern time. Rock art is only way to directly visualize the prehistoric society and peep into the lives of prehistoric people. Researchers have not paid much attentions to the meaning and importance of such depictions in rock art. In the present paper, we will investigate the universal problems of reproduction in human and human behaviour to overcome it and how these activities are expressed in rock art of India.

The beginning part of the paper deals with the evolutionary aspects of human to explain the biological phenomena of reproduction, the discussion is based on well researched articles published in reputed journals of world and the later part of the paper deals with Indian rock art which is based on a collected data from different parts of India published in articles, books and discovered by the present authors.

## **Human Anatomy and Complications in Child Birth**

Human anatomical changes led them to cope with environment more powerfully. The balance between human brain and body was the most responsible thing for their cognitive and physical evolution. But this evolution took a high price from the women by directly increasing the complications of pregnancy and childbirth. The two main features of human anatomy are; the upright position of locomotion and the increased brain size (Foley and Lee 1991). We shall try to understand how these anatomical features affect the process of reproduction and social structure in following points:

- (a) Upright position directly affected the birth canal which is situated in the pelvic area. For upright position of body, the pelvic area must become constricted which narrowed the birth canal and twisted it into 'S' shape through which the fetus must come out with a tight squeeze (Trevathan 2015; 2017). Secondly, the size of human brain also increased gradually. The size of human birth canal is almost equal to the brain size of fetus. This situation is responsible for the 'obstetric dilemma' in human. That's why for the safe child birth women need assistance of from someone during delivery (Figure 1a) (Shipman 2013, Rosenberg and Trevathan 1996,

Trevathan 2017). This situation also increased the labor period in human which almost takes one day while other mammals bear the pain for 2 to 4 hours normally. This is the reason for the high-risk delivery in women. Other animals and apes do not need assistance, they use their own hand or the babies help themselves to come out because they have almost straight and spacious birth canal due to being quadruped and their infants have smaller brain size comparable to mother's birth canal (Trevathan 2015) (Figure 1b).

- (b) Another issue is called, "the energetics of gestation and growth" (EGG) hypothesis which is a theory that explains the timing of birth by considering the balance between the fetus's energy needs and the mother's ability to meet those needs. When mother's body is not able to meet the metabolism of fetus the labor begins (Shipman 2013). The increment in brain size of human also affected energy requirements. Brain is metabolically expensive tissues, which consumes energy more than any other organ so, the bigger the brain, the more energy it consumes (Aiello and Wheeler 1995). When a woman is carrying a big brain fetus inside her womb, which is developing every day, her energy requirements are comparatively higher. In lack of proper nutrition, the mother and fetus may risk their lives and this is also a reason for still births. In this condition a pregnant female in humans needs extra care and support from the family and society who must help her in whole gestation period.
- (c) The process is not done even after child birth, the infant needs care and support until its brain and body fully grown. Most of the animals' newborn become able to walk and run in few days after birth but human's newborn takes a long time in maturity. Since the mother lactates her new born, she is more responsible for the upbringing of the child and she has to depend on other people for her energy requirements from the gestation period to lactation period.
- (d) The whole process of reproduction in humans did not remain individual's responsibility but became a social responsibility which created the concept of family and also became a reason for division of work in male and female.
- (e) Production of totems and symbols and rituals related to puberty, pregnancy and child birth became part of cultural and social behaviors which performed to celebrate such occasions as well as to gain psychological strength to cope up with related difficulties. We see many rituals in Indian society are still performed to favor healthy pregnancy, safe child birth and fertility of men and women. These are cultural aspects of human behaviour to manage the reproduction problems.

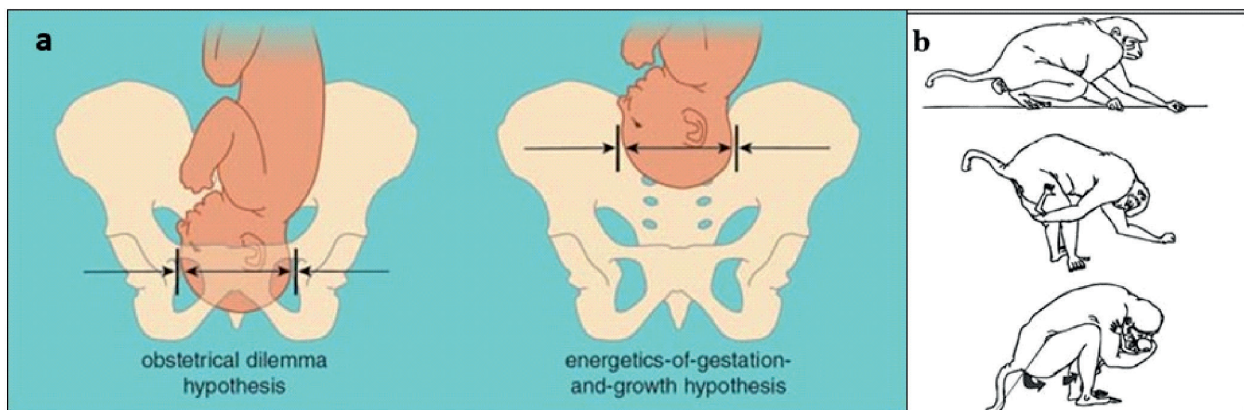


Figure 1a: The narrow pelvic area of in human and tight fit head of fetus which compels assisted delivery, (After: Shipman 2013) (Illustration by Tom Dunne) b: Self-delivery in monkeys (After: Trevathan 2015)

To find out how the social and cultural behaviour of early humans was growing around pregnant women and child birth, we looked into Indian rock art and found some interesting instances which are given in following table (Table 1):

**Table 1: Fertility Motifs, Pregnancy and Child Birth Scene in Rock Art**

<i>S. No.</i>	<i>Site</i>	<i>Description and Figure No.</i>	<i>Tentative period</i>	<i>Reference</i>	<i>Remarks</i>
1.	Kushuwar Thang, Nubra Valley, Ladakh	<b>Delivering Mother</b> <b>Technique-</b> Battering and scratching A woman sitting in a squat position, her breasts are presented with two triangles, one hand raised up and another seems to grab the newborn. The umbilical cord is also depicted. The figure is quite realistic but engraving is coarse and irregular ( <b>Figure 2 a</b> ). On another large block next to the above, one more delivery scene is found. In the composition, two standing characters probably engaged in sexual fondling depicted as the previous step of birth and near it a delivering woman is depicted with two other characters who are assisting her in delivery ( <b>Figure 2 b</b> ).	Tentative dating based on stylistic features of western Tibet plateau style. These may belong to bronze age to early iron age (2 <sup>nd</sup> to 1 <sup>st</sup> millennia B.C.E.) (Bruneau and Bellezza, 2013)	(Devers <i>et. al.</i> 2015)	In the first scene, the woman is self-assisting the delivery which is a rare thing.  Similar figures are found in Tibetan plateau rock art and spiti valley of Himachal Pradesh  The figures having aura behind their head shows the divineness of women (Bruneau & Bellezza, 2013).
2.	<b>Channain-Maan</b> , Bandha Region, Kaimur district, Bihar	<b>Pregnant women in moving with convoy</b> <b>Technique-</b> Painting in silhouette <b>Colour-</b> Dark red colour Twelve human figures including nine men and four women are moving in a convoy with cattle. One man is old age and other men are depicted in muscular bodies and women with breasts and large pregnant wombs. They are following a herd of cattle with hump and big horns. Men are carrying luggage and sticks with them. Women are free handed. There are some monkeys below the scene ( <b>Figure 3a</b> ).	Belongs to farming culture so it might belong to Chalcolithic or post chalcolithic period		This figure clearly depicts an agricultural society. A similar scene is found in the rock art gallery of Chaturbhujnath nala ( <b>Figure 5</b> ).
3.	<b>Isko</b> , Barkagaon block, Hazaribagh district, Jharkhand	<b>Delivery scene</b> <b>Technique-</b> Painted in Silhouette style and outlines in red and white colour <b>Colour-</b> Dark Red A human figure with stretched legs and upward raised hands. A small human figure is coming out of her womb. Other motifs around the figure are only abstract motifs commonly found in paintings of Jharkhand ( <b>Figure 3b</b> ).	Due to absence of any hunting scene in whole shelter it seems to belong to a farming and settled society.	(Saha and Rajak 2019)	There are many depictions of pregnant and delivering mothers on different sites of Jharkhand like Nautangva, Sipda, Thethangi etc. These motifs are generally found along with abstract and geometric motifs.

S. No.	Site	Description and Figure No.	Tentative period	Reference	Remarks
4.	<b>Panchmukhi</b> rock shelter no. 6, Sahijan Kalan Village, Roberts Ganj, Sonbhadra district, Uttar Pradesh	<b>Delivering mother</b> <b>Technique-</b> Painted in line drawing <b>Colour-</b> Red A human figure (woman) with stretched legs and hands. An object with a circular end is extruding from her womb which is probably a newborn. Another human depicted between her legs probably assisting in delivery. Two small anthropomorphs are made by each side of the delivering woman ( <b>Figure 4</b> ).	Early Historic		This figure is only one of this type of figure in the whole region even the whole shelter is unique with its depiction which generally includes rectangle with plus inside, small circles, and some circle with a dot inside and some with a hook like thing on its top. 'S' shape and 'U' shape designs are also depicted in large numbers. Sometimes the assemblage of these motifs seems to be some mysterious script.
5.	<b>Chaturbhuj Nath Nala shelter no. B1</b> , Mandsaur district, Madhya Pradesh	<b>Pregnant Women in Caravan</b> <b>Technique-</b> Painted in Silhouette Style <b>Colour-</b> Red A large convoy of men, women and cattle is depicted in which women are shown pregnant and carrying some object on their head. Men are also carrying <i>Kanwar</i> (Loads hanging from both ends of a stick) over their shoulders. A few ithyphallic men in the front row are holding the horns of cattle like they are confronting them. The whole scene is superimposed on earlier depictions of humped and big-horn cattle ( <b>Figure 5</b> ).	Chalcolithic	(Kumar 2007)	Similar to figure S.No.2 , Figure 3a
6.	<b>Bhimbetka</b> rock shelters (III C-9), Raisen district, Madhya Pradesh	<b>Pregnant woman and family</b> <b>Technique-</b> Painted in silhouette and line drawing <b>Colour-</b> Dark red There are 6 members in a group, the pregnant woman is in the center of scene, one small child playing with a stick, one aged woman wearing rhinoceros mask probably playing with a baby and one man walking to the left holding a stick on his shoulder and a boy is below him ( <b>Figure 6 a</b> ).	Mesolithic (According to Y. Mathpal)	(Mathpal 1984: 56-57)	--

<i>S. No.</i>	<i>Site</i>	<i>Description and Figure No.</i>	<i>Tentative period</i>	<i>Reference</i>	<i>Remarks</i>
7.	<b>Bhimbetka</b> rock shelters (C-12), Raisen district, Madhya Pradesh	<b>Woman giving birth</b> <b>Technique-</b> Painted in Outlines and Decorated Inside <b>Colour-</b> Burnt Umber There are three figures in squat position and their bodies are outlined and decorated with 'v' and '0' shape designs and they have been called 'spider shape women' by Mathpal (1984). The middle one is the biggest and an infant is depicted beneath her which seems like a new born. Other spider shaped figures vanished partially. Other motifs are stick human figures ( <b>Figure 6 b</b> ).	Mesolithic (According to Y. Mathpal)	(Mathpal, 1984: 100, 154)	The figure is based on the eye-copy made by Y. Mathpal. Mathpal (1984) writes the woman as "Mother goddess".
8.	<b>Lakhajoar</b> rock shelter, Raisen district, Madhya Pradesh	<b>Pregnant woman</b> <b>Technique-</b> Outlines and Line Drawings <b>Colour-</b> Red There is a scene of a family sitting inside a hut. A man, a woman (shown with breast) and a child (smaller human figure in the middle), all taking meals. The woman is pregnant sitting on the right side. This is a unique picture mirroring prehistoric social life ( <b>Figure 7 a</b> ).	Mesolithic (According to Neumayer)	(Neumayer, 2011: 105)	The stomach of the female is shown swollen and a small fetus inside which is noticed as fish by Neumayer but in present authors' view it is denoting a fetus.
9.	<b>Chave site,</b> Ratnagiri district, Maharashtra	<b>Delivering mother (Earth Figure)</b> <b>Style-</b> Relief <b>Technique-</b> Hammering and engraving A woman with stretched legs and swollen womb engraved on the floor. The space between her legs is widely engraved in rectangular form. The image seems to depict a pregnant woman in her delivery stage ( <b>Figure 7 b</b> ).	There is no direct or relative date for the earth figures of Konkan. But on the basis of the theme and technique of this site authors would like to keep them between chalcolithic to iron age cultures.		This figure is rare in this whole region



Figure 2a: Self-assisting delivery, Kushuwar thang, Nubra Valley, Ladakh (After: Devers, et al., 2015),  
b: A divine mother delivering child, Tangtse site, Upper Ladakh (After: Bruneau and Bellezza, 2013)

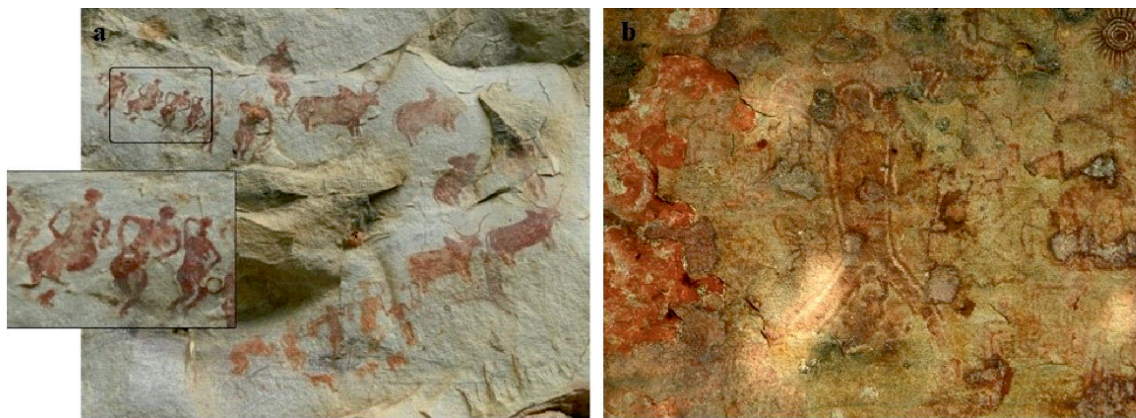


Figure 3 a: Pregnant women in Carvan with men and cattle, Chanain Maan rock shelter, Kaimur, Bihar,  
b: Delivering mother, Isko rock shelter, Hazaribagh, Jharkhand

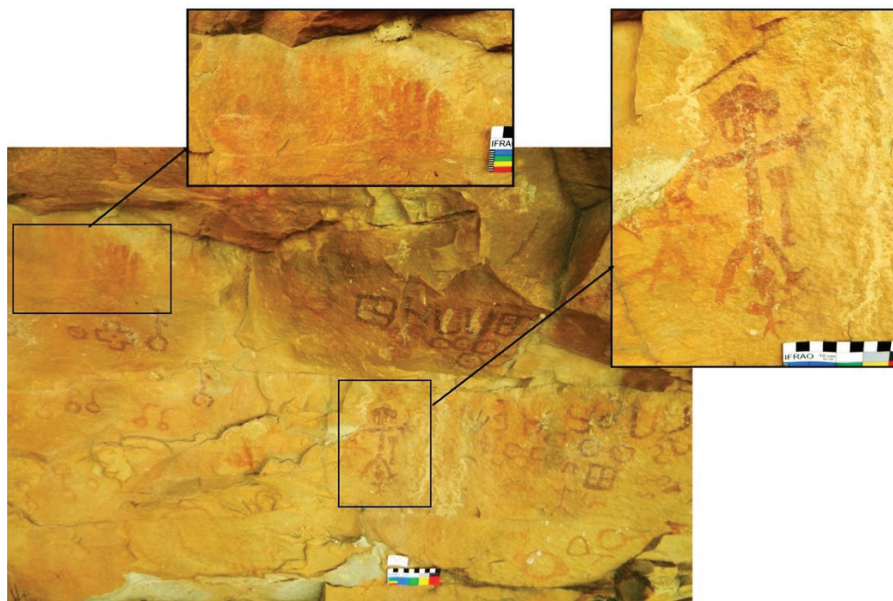


Figure 4: Delivering mother with babies, Panchamukhi rock shelter, Sonbhadra, U.P.

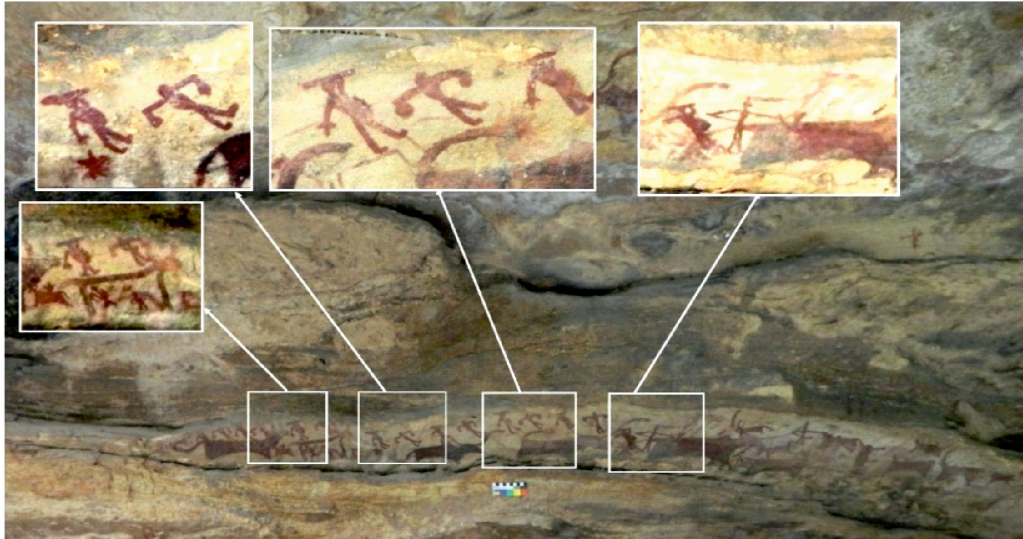


Figure 5: Depiction of a caravan of men and pregnant women carrying goods, with cattle without hump, some men fighting with cattle or holding the horns of cattle, Chaturbhuj Nath Nala site, Mandsaur district, M.P.

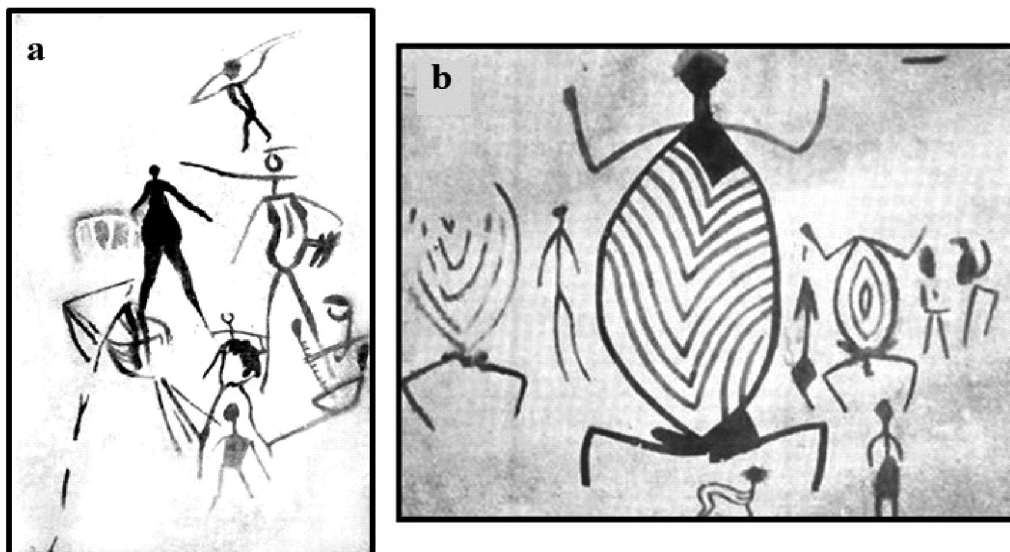


Figure 6a: Pregnant woman with family doing household activities, Bhimbetka, M.P. (After: Mathpal 1984: 56-57),  
 b: A divine figure of woman stretching legs and upward hand delivered a child who is depicted between her legs, Bhimbetka, M.P. (After: Mathpal 1984: 100)

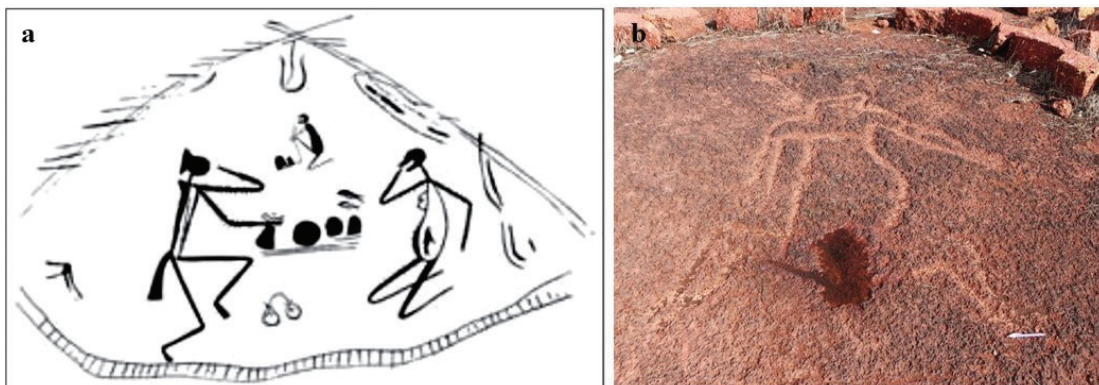


Figure 7a: Pregnant woman with having her supper with family, Lakhajuar, M.P. (After: Neumayer 2011: 205), b: Delivering Mother, Chave, Ratnagiri, Maharashtra



### **Social Behaviour For Pregnancy and Child Birth**

Some of above depictions of pregnant woman, child birth scenes and other scenes reflects the picture of family, community and early societies.

The family scene inside hut from Lakhajoar depicts a narrative around pregnant woman that she is having meal with her family. The structure of family is mostly shown along with a pregnant woman and children (Table 1, S.No. 8, Figure 7a). A similar family scene with a pregnant woman is reported by Mathpal from Bhimbetka shelter no. III C9. There are 6 members in a group, the pregnant woman is in the center of scene, one small child playing with a stick, one aged woman wearing rhinoceros mask probably playing with a baby and one man walking to the left holding a stick on his shoulder and a boy is below him (Table 1, S. No. 6, Figure 6a). The picture is eye-copy made by Mathpal and also interpreted by him (Mathpal 1984: 56-57). Both of the scenes show a theme of family growing around pregnant women.

A delivery scene from Panchmukhi rock shelters shows the concept of assistant (dhay/dayi/midwife) during delivery (Table 1, S. No. 4, Figure 4). The caravan scene in Chanain Maan shelter depicts moving men, women and cattle representing a nomad pastoral community which is probably migrating from one place to another. All the women in the caravan are depicted pregnant (Table 1, S. No. 2, Figure 3a). A very similar painting in Chaturbhujnath Nala rock art gallery in Chambal region has depicted a large caravan scene with pregnant women carrying some objects on their heads, men carrying objects on shoulders and some ithyphallic men fighting with charged big horned and humped cattle. This is also representing a nomad pastoral community. In both of the scenes, women are shown pregnant which represents the mindset of artists they deliberately wanted to picture women as reproducer and it also shows the mirror of contemporary society that women carrying load and moving far during pregnancy which can be seen in village communities in India till present (Table 1, S. No. 5, Figure 5). When humans started agro-pastoral activities they had to stay on a place and required a good number of people to perform agricultural tasks, increase security, make pottery, regional trade, art and crafts so, they emphasised on increasing population. As a result, women gradually became subject of sexual importance and reproduction and merely remained restricted to raising children and household things. This situation is highly reflected in art of chalcolithic period (Neumayer 2011: 206) (Singh & Tiwary 2023).

### **Cultural Behaviour For Pregnancy and Child Birth**

Culture is reflected through the beliefs and traditions. These beliefs and traditions are expressed through rites and rituals which is called the cultural behaviour. For good fertility, pregnancy and safe child birth people do many rites and rituals and worship several god and goddesses which is also reflected in Indian rock art.

The child-birth scene from Panchmukhi seems to be connected with some ritualistic activity in the shelter because there are palm impressions of adult and children in the shelter which indicates the ritualistic significance of the shelter. The whole shelter is filled with kinds of signs and motifs which looks alike letters of a script (Table 1, S.No. 4, Figure 4).

Figure of a child delivering mother in Kushwar Thang is interestingly made without delivery assistant. The woman is using her own hand in pulling out the baby from the womb (Figure 2a). Her breasts are made with triangles, her legs are widely stretched and one of her hands is raised upward. The head is decorated with crown. The woman seems a divine figure by seeing above features. The same site has another boulder with similar woman figure but it is associated with other motifs like a mating couple and two delivery assistants (Table 1, S.No. Figure 2a and b). Such figures are common in Western Tibet plateau rock art. It clearly depicts a goddess of fertility, mother or children who was worshipped in Trans-Himalayan region.

Isko and other sites in Hazaribagh district depict pregnant and delivering mothers frequently which are made without any assistant, associated with many mysterious symbols and abstract designs. The paintings in Isko shelter depicts delivering mother, phallus, sun, moon and many other abstract motifs which looks alike Kohbar art. Kohbar art is made during wedding ritual in Oraon and some other tribes of Jharkhand, the Kohbar paintings is made to encourage reproduction and to bless happy married life to newly married couple (Table 1, S.No. 3, Figure 3b).

The mother figure of Bhimbetka who is sitting in squat and a crawling infant is depicted beneath her also depicts a divine figure because the other human figures associated with her in the scene are quite smaller which is confirming her divinity. Mathpal also writes her as Mother Goddess (Table 1, S.No. 6, Figure 6b).

The geoglyphs of Konkan region, Maharashtra are enigmatic depictions in Indian rock art. They includes very different kind of motifs but interestingly there is no hunting scene and contrastingly there is no farming or agricultural related scene found till date. Humped bulls are found only in the southernmost part of Konkan but not in Maharashtra. The depiction of birth giving mother is also an interesting part of geoglyphs of the region which is the only figure of this kind reported till date. There are fish, wild animals and abstract designs depicted with the figure. (Table 1, S.No. 9, Figure 7 b).

### Legacy of Mother Goddess Worship

There have been a long tradition of worshipping mother form of woman in Brahmanical tradition. In modern time Hindu people are worshipping mother goddesses with great devotion for which a whole ten days festival of *Durga Pooja* or *Navratri* is celebrated in north India. Some of the Hindu people also worship the female genitals as symbol of mother goddess as seen in Kamakhya temple in Nilanchal hill, Assam which is a living example of vulva worship (**Figure 8 a**). She is the ancient mother goddess who is worshipped in the form of ‘Yoni’ or vulva. Yoni in Sanskrit literature means source or womb which is sign of sex, birth, rebirth and incarnation, thus it becomes symbol of procreation (Singh 2011). Rock art of Odisha, Gawilgarh (Madhya Pradesh) and Ramachandrapuram (Andhra Pradesh) has so many depictions of vulvas which show the tradition of vulva worship was part of people living in these forests (Figure 8 b). There are many local forms of worship of female reproductive powers which are described in following table (Table 2).

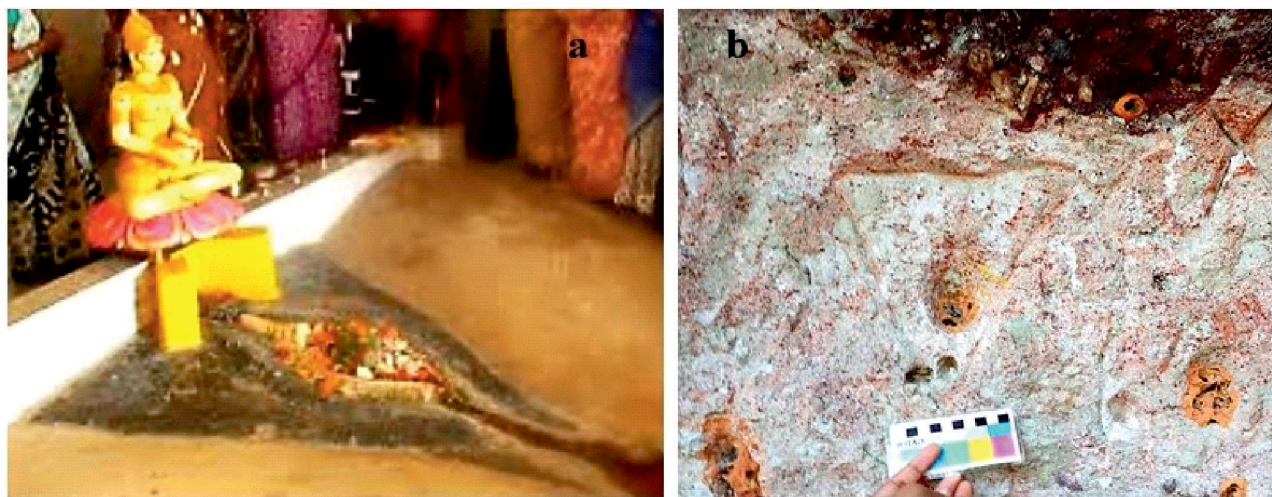


Figure 8 a: Kamakhya Devi of Assam (Source: <httpshindi.oneindia.comreligion-spiritualitykamakhya-temple-story-a-bleeding-devi-422351.html>), b: Vulva engraving a common theme of rock art of Odisha, Bhimamandali rock shelter, Sambalpur, Odisha

**Table 2: Traditions of Mother Goddess Worship**

S.No.	Name	Region	Inhabitant or executors	Purpose and Context (taken from the cited references)	References	Remarks
1.	Lajja Gauri/ Juyulamba/ Matangi/ Mesko/ Nagna kabam- dha/ Renuka/ Yellammanna (Figure 9 a)	MaharashtraT- amil Nadu, Karnataka, Gujarat	Women	Worship with images of Nude goddesses like Lajja Gauri by applying butter and Kumkum to their Yonis to procure children or to secure agricultural purposes	(Sonawane, 1998)	Engravings of very similar iconography are seen from rock art of Tibet, upper Ladakh, Spiti (Himanchal Pradesh), Isko (Jharkhand) and Chintakunta (Andhra Pradesh) (Bruneau and Bellezza 2013) (Neumayar 2011: 251)
2.	Charkhopadaine (Figure 9 b)	Kaimur region, Bihar	Women	Making a figurine of a woman with stretched legs and upraised hands on the wall by cow dung and an inserting burning stick into her vagina during the ritual to secure the farming and animals by natural calamities produced by Charkhopadaine.	(Tiwary, 2011)	The goddess is negatively related with agriculture and crops because her sexual powers are considered responsible for disasters which is controlled by burning her desires.
3.	Dhundhi Rakshasi	Chhattisgarh	Women	-do-	-do-	-do-



**Figure 9 a: A flower headed Lajja gauri flaunting her genital, Seonit, M.P. (After: Bolon, 1992),  
b: Burning stick being inserted in genital of the female figurine in the worship of Charkhopadaine, Kaimur, Bihar (After: Tiwary, 2011)**

## Conclusion

The described data on the depiction of pregnant and delivering mothers in rock art can be classified into two kinds of expression; one depicting the fertility power of woman as a deity and the other playing a part in the social structure. We don't have any scientific date for these mother figures in rock art but as far as the authors have noticed most of them belong to Agro-pastoral communities that means Neolithic and Chalcolithic periods and a few of them belong to the historic periods. These figures are found in the north from Ladakh to Andhra Pradesh in the south with somewhat technical changes but the iconography is very similar everywhere. The women are sometimes shown with divine features like hollow behind head as seen in Trans-Himalayan region which definitely shows that it is a developed form of iconography of goddesses. Similar concepts of mother and children are seen in central India at many places which shows a shared iconography and ideology among these folks who depicted such figures on rock. Probably, the concept of divine mother originated as archetype symbol in different groups located far from one another or it would have been an easy to adopt symbol for people living in different geographical regions whether they lived inside the forests or cold deserts of Trans-Himalayan region. It can also be believed that women must have played a major role in spreading the idea of mother goddess because these are women who faced the problems in pregnancy and childbirth so, they might have easily adopted these symbols and beliefs related to divine mother. Though there is no doubt that all the pregnant and birth giving women depicted in rock art are not the divine mothers, many of them may be merely depicting the social life. Yet, they show women's role as birth giver and its importance in the formation of a social structure.

## Acknowledgements

This study was supported by the Grants of the Institute of Eminence, Banaras Hindu University. The grant ID is 6031. We also thank the Indian Knowledge System Division for their project funds and support.

**Competing Interest:** The authors declare that they have no competing interests.

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