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A hermeneutic phenomenological exploration of the cultural components of the bio-cultural landscape of the Wayanad dwarf cattle

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Abstract

The focus of the present study was the cultural components of the bio-cultural landscape of the life world of the Wayanad Dwarf cattle keepers of Wayanad district of Kerala state. The resilience of these socio ecological systems depends to a great extent on the tangible outcomes through which communities interact with their landscapes that include the cultural components of the bio cultural system. The present study was undertaken with the aim of studying the cultural components of the bio-cultural landscape of this system.

A hermeneutic phenomenological stance with thematic analysis of narrative experiences of the respondents was used to study the lived experience of the *Kuruma* cattle keepers who are involved in Wayanad dwarf cattle keeping. The study was conducted among eight information rich respondents from Noolpuzha, Amabalavayal, Thirunelly and Thavinhall panchayats of Wayanad district of Kerala state. Thematic analysis of the interview transcripts revealed five major themes that centred around smaller subthemes, related to the cultural components of the bio-cultural landscape of Wayanad dwarf cattle keeping. these included the role of the Wayanad dwarf cattle on the traditional rice fields of Wayanad, the role of the *Kuruma* tribespeople as custodians of the Wayanad dwarf and traditional rice varieties, the Wayanad dwarf as a means of subsistence and livelihood, the perceived cultural attributes of the Wayanad dwarf cow and the cultural role of Wayanad dwarf cows and its products in the life world of the keepers of the Wayanad dwarf cattle. An understanding of the bio-cultural landscape of the Wayanad Dwarf cattle is crucial to sustain efforts directed at the conservation of these animals.

Keywords: Wayanad dwarf cattle, life world, hermeneutic phenomenology, bio-cultural landscape

Introduction

Cultural heritage does not merely refer to tangible structures like monuments, but also encompasses the broad range of intangible elements such as the traditions or living expressions inherited from one's ancestors. The bio-cultural landscape comprises the biological, physical and cultural process that are unique to an area of which indigenous knowledge system is crucial part. Traditional knowledge is embedded in complex cultural systems. The focus of this study was the cultural components of the bio-cultural landscape of the life world of the Wayanad Dwarf cattle keepers as constructed by them using their contextual and personal frames of reference in their daily life as they engaged in the stewardship of this animal in a cultural landscape created through time. Thematic analysis of the interview narrations of the respondent farmers revealed the recurring theme to the traditional festivals that revolve around rice farming and harvest being central to the life world of the *Kurumas*. Cultural heritage does not merely refer to tangible structures like monuments, but also encompasses the broad range of intangible elements such as the traditions or living expressions inherited from one's ancestors. Living expressions Bridgewater and Rotherham (2019) [7] also observed that the creation and maintenance of

traditional landscapes and their self-contained ecological systems are also crucial components (Agnoletti and Rotherham, 2015) [1] of cultural heritage.

These encompass oral traditions, performing arts, rituals, festivals and the vast array of knowledge and practices about nature and the universe (Bridgewater and Rotherham, 2019) [7]. In addition to these range of components that encompass cultural heritage as mentioned above, Cultural landscapes that are unique to a particular region of the world are the combined effect of nature and humans and they signify the deep and intricate relationship between people and their natural environment (UNESCO, 1972) [28]. The dynamics of cultural landscapes according to Nassauer (1995) [20] is based on the four principles that view human landscape perceptions, cognitions and values as directly affecting landscapes and being affected by landscapes; landscape patterns as being shaped by cultural conventions; differing concepts of nature and ecological functions held by communities and that of the scientific community and the role of cultural values in shaping the aesthetic appearance of landscapes. It was these four principles of Nassauer (1995) [20] that gave rise to the use of the term bio-cultural while referring to the use of the term landscapes by Bridgewater and Walton (1996) [8] as being shaped by the blending of

human activity and the expression of biodiversity, thus giving rise to what they referred to as bio cultural landscapes. Poe *et al.* (2014) ^[23] also observed that bio cultural landscapes were the products of the joint production process of biophysical process and customary landscape management practices. The bio-cultural landscape comprises the biological, physical and cultural process that are unique to an area of which indigenous knowledge system is crucial part. Traditional knowledge is embedded in complex cultural systems (Berkes *et al.*, 2000) ^[4]. Indigenous Technical knowledge has been described as specialized information specific to a certain culture or community (Sauvra *et al.*, 2023) ^[25]. The interaction between communities and their natural, historical and social environments overtime gives rise to their unique culture. Their environments are important because they satisfy material needs of the community for food and water as well as fodder for their animal and medicine. In addition to material aspects, these environments are important in providing people with a basis for ethical values that they espouse as well as their concept of sacred spaces, aesthetic experiences and personal as well as group identification (Kassam, 2009) ^[16].

The voice of the indigenous people has often been underrepresented in global conservation discourse and their crucial role in giving form to and maintaining landscape has also had the same reception (DeGorger and Reilly, 2009) ^[10]. The concept of cultural landscape captures the entire expanse of human-environment interactions including associated uses and beliefs as well as practices and traditions. Previous approaches to conservation especially those centred upon the management of protected areas have their foundations rooted on ordered ecological systems that were undisturbed by humans (Wu and Loucks, 1995) ^[30]. These views have now been replaced with approaches that see ecosystem and the current global context - for that matter- as the result of a complex interplay between activities of economic and political origin and changes in the environment and climate and transformation on the social and cultural plane. This new understanding has rephrased the current practice of conservation to account for anticipated future threats besides providing sufficient room to accommodate various genetic and ecological processes that result from communities responding to change. The resilience of these socio ecological systems depends to a great extent on the tangible outcomes through which communities interact with their landscapes such as folklore, agro biodiversity and food sovereignty. Indigenous communities in their traditional or ancestral environments are intrinsic elements of these social ecological environment that have been shaped by very long process of interdependency co-evolution. Tribal communities all over India have their own preferences for rearing native breeds of cattle and poultry. Yadav and Bhimawat (2020) ^[31] reported that the tribal farmers of Bhilwara district of Rajasthan had a strong preferences for Kadakanath, a native poultry. Wayanad dwarf cattle have been reported from the *Kuruma* tribal settlements of the Kurichiat Range of the Wayanad Wildlife and Muthanga Wildlife sanctuaries as well as from the Periya area of Manathavady block in Wayanad district and from the catchment areas of the Karapuzha Dam (Kerala Biodiversity Board, 2016) ^[17]. There is of date,

however no study on the cultural components of the bio-cultural landscape of this system. It is important that dairy farming systems are studied so as to ensure that strategic planning and government intervention can be forthcoming (Barman, *et.al.*, 2024; Prashanthi and Reddy, 2022) ^[3, 21]. It was in this context that the present study was undertaken.

Methodology

The focus of this study was the cultural components of the bio-cultural landscape of the life world of the Wayanad Dwarf cattle keepers as constructed by them using their contextual and personal frames of reference in their daily life as they engaged in the stewardship of this animal in a cultural landscape created through time. Life world here referred to the original ground of all theoretical and practical life of the keepers of the Wayanad Dwarf cattle (Zelic, 2007) ^[33]. Keeping in mind the objective of this study to gain an understanding of the experiences of the respondents and the role of the Wayanad Dwarf cattle in shaping these bio-cultural landscapes an interpretative/constructivist research design was used for the study. The interpretative/constructivist paradigm based on the epistemology of idealism and exploration of the social world of individuals was used for this study. Keeping in mind the objective of the study to generate information rich cases consistent with the interpretive research paradigm, theoretical sampling was used to select 12 Wayanad Dwarf cattle keepers for data collection through in depth repeated interviews till thematic and theoretical saturation was achieved (Ajajawi and Higgs, 2007; Guest *et al.*, 2006) ^[2, 14]. Hermeneutic phenomenology with thematic analysis was the research method used for the second phase of this study. This approach to research attempts to decipher the experience of the individual assuming that the reality of the individual is socially constructed. The importance of this research paradigm lies in its emphasis of the view of the participant in the situation under study. This research paradigm also provides a framework for making the background and the experiences of the participant or respondent a part of the research outcome. In contrast of the positivist paradigm, the constructivist paradigm does not begin with theory; it generates theory, or a pattern of meaning, inductively. Wayanad district of Kerala state was selected purposively for this study since the Wayanad Dwarf cattle are reported from this district. Data for the study was collected using an interview guide that had been prepared through a pre pilot test and tested among eight non-sample respondents from Noolpuzha, Amabalavayal, Thirunelly and Thavinhil panchayats. This pretested interview guide was then used to collect data from 12 respondents identified for the second part of the study through unstructured personal interviews followed by thematic analysis of the interviews.

Thematic analysis of the interviews for was undertaken as per the procedure of Braun and Clarke (2006) ^[6] as follows:

Step 1: Familiarisation with the data by transcribing, reading and re reading the transcribed interview extracts and noting down initial ideas generated through discussion with the respondents

Step 2: Generation of initial codes and systematically coding important features of the data across the entire data set and collating the data relevant to each code

Step 3: Collating codes into potential themes and gathering data relevant to each theme

Step 4: Reviewing themes at two levels; first level check if the theme matches with the coded extracts and second level-checking if the theme matches with the entire data set

Step 5: The themes were then reanalysed again and again to arrive at a clear idea of theme

Step 6: Producing the text of the final scholarly report by combining various themes that emerged from the above process.

Results

Theme 1 – The traditional rice fields

Thematic analysis of the interview narrations of the respondent farmers revealed the recurring theme to the traditional festivals that revolve around rice farming and harvest being central to the life world of the *Kurumas*. The main festivals that recurred through the data sets as comprising the cultural world of the *Kurumas* included the *Thulapathu*, *Puthari*, and *Uchal* that celebrate the planting of paddy saplings and the harvesting of rice. Paddy cultivation has also been reported among the tribal community of Assam (Bora *et. al.*, 2023) ^[5]. Among the *Kuruma*, traditionally, planting the sapling is a ritual and is celebrated with festivities. community. The head of each hamlet, the eldest male member, performs *poojas* in the *Daivappura* (a place of worship) and his lighting of the *nilavilakku* (traditional lamp), marks this day as an important one for the community. The celebration *Thulampathu* or *Putthari* (meaning ‘new rice’) is significant for this paddy farming culture. This was followed by a hunting expedition, referred to as *Uchal*, in the evening, in former days but now this is not practiced due to the restrictions imposed by the Wildlife Protection Act, 1972.

Theme 2 - Custodians of the Wayanad dwarf and traditional rice varieties

Thematic analysis of the narratives of respondent farmers indicated the recurrent themes that centred on the fact that the Wayanad dwarf cows were treated as common property of the hamlet and were reared in large stables for all such cows in the hamlet. Over the data set another theme that was repeatedly encountered was the fact that the *Kurumas* generally tend to avoid rearing crossbred cows, despite their stated advantages, in view of their strong dislike for the milk of crossbred cows. Data from the transcribed interview transcripts indicated the recurring theme that highlighted the belief of the *Kuruma* tribesfolk that they were the custodians and stewards of the Wayanad dwarf cattle and the firm assertion that the protection of native cows was synonymous with protecting their culture and heritages.

Cultural beliefs about organically grown agricultural produce and milk and dairy products made from milk of the Wayanad dwarf cattle being the secret to the health of the *Kuruma* community and the consequent need to sustain the ecosystem within these natural resources thrive also emerged as a recurring theme while analysing the transcripts of the interviews with the respondents of the study. In addition to these beliefs, the basic view of the *Kuruma* farmers that their mental happiness and source of entertainment lay in rearing the native Wayanad cow was also an important factor that kept them engaged in this

vocation. The surprising revelation was that contrary to popular thought, this feeling was elicited by all the respondents irrespective of age and the cultural attributes of this animal was appreciated even among the younger members of this community as well. Abandonment of indigenous cows was cited as a very painful situation with significant psychological stress by the keepers of this animal. A life without the Wayanad dwarf was something unthinkable for the *Kuruma* farmers, as revealed by the theme that emerged wherein farmers repeatedly mentioned that they did not want a life where the Wayanad cows were excluded from their bio cultural landscapes.

Theme 3 - Wayanad dwarf as a means of subsistence and livelihood

Analysis of the interview transcripts revealed that secondary underlying reasons for rearing the Wayanad dwarf cattle were for subsistence and as a source of livelihood.

Among the respondents studied, the sale of the dung of these animals –which was sold once or twice an year- was a major source of income and it was not uncommon for farmers from other parts of Wayanad to visit the *Kurumas* for the purchase of this valuable source of income. The urine of the Wayanad dwarf was also collected separately and sold to customers who specifically came to purchase the same. The other source of income from this system was through the sale of one- or two-year-old bull calves and aged bulls as well. These were sold to butchers and middle men for meat. Cultural norms however prohibited the *Kurumas* from selling any female animals, whether heifers, calves or cows. These were never sold; rather they were reared as prized possessions till death of the animal on the hamlet itself. Analysis of the data transcripts indicated the recurring theme that though the female Wayanad dwarf cow in all its stages was given a special position on their hamlets, the practice of attributing any divine character or nature to the female Wayanad dwarf cow was not practiced by the *Kurumas*.

Theme 4 - Cultural attributes of the Wayanad dwarf cow

Recurring themes that emerged during the analysis of the transcripts of interviews with the respondents indicated that the Wayanad dwarf cow was equated with the heritage and culture of the *Kuruma* tribe folk; protection and preservation of this animal, to the *Kurumas* meant the protection and cultivation of their heritage and culture. Important cultural concepts of wealth in terms of the perception of the *Kuruma* tribe people also emerged from the information generated through the analysis of the transcribed interviews that shed light on the important symbolic meaning of wealth that was ascribed to the Wayanad dwarf cow so that the wealth of a *Kuruma* family or hamlet was calculated in terms of its population of the Wayanad dwarf cow which was in line with the findings of Dash and Sethi (2007) ^[9] who observed that the *Koya* tribesmen also equated prestige and social standing with the number of native *Motu* cows on a household.

Indigenous cows are maintained as an additional source of income along with farming. Wayanad dwarf cow rearing is a very cost-effective method of rearing. A good amount of income per year is obtained from native cows without any

cost like feed, treatment and medicine. Indigenous Wayanad cows are cared for to obtain milk for domestic use and to produce various dairy products. Farmers believed that the milk quality and medicinal value of Wayanad cows is high.

Theme 5 - Cultural role of Wayanad dwarf cows and its products

Thematic analysis of the interview transcripts of the narrations of the respondent farmers indicated the recurring theme that the native cows were associated with the rituals and festivals of the *Kuruma* community. The important cultural role of the milk of the native cow in the ceremonies in the traditional family temples also referred to as the *Daivappura* was a repeated theme across the data sets. Milk and milk products of native cows are offered in the *Daivappura* during traditional festivals like *Uchchal* and *Thulapathu*. The importance of the milk of the Wayanad Dwarf cattle in the preparation of traditional and culturally priced food delicacies of the *Kuruma* community like *Mulayaripayasam*, and others that are used during special occasions and distributed among members of the community are prepared by the *Kuruma*, using native cow milk was another recurring theme that emerged highlighting the cultural role of the Wayanad Dwarf cattle in the life of the local community. These foods are used during the traditional events of *Kuruma* community such as the wedding ceremonies, death ceremonies and ceremonies related to the coming of age ceremonies of young girls (menarche). The *Kuruma* repeatedly articulated the theme that only the milk of the Wayanad cow could be used to prepare these culturally important food items that complete the life cycle of the *Kuruma* tribes people. Importantly significant was their views of the use of the milk of the crossbred cow. The closest translation of the vernacular word that was used to describe their feeling on why they do not prefer to use the milk of the cross bred cow was that they abhorred the milk of the cross bred cow and hence would not use it. Though the *Kuruma* tribesmen sold their male animals for meat purposes they themselves would never and do not slaughter their animals for meat purposes or use the meat of their animals for ceremonial purposes.

Dung is an important product of the Wayanad dwarf cattle keeping system. Fresh dung from these animals is considered auspicious and it spread on the floors of their home and shrine twice in a year to instil cleanliness and purity to their residences. Brooms made of sticks of the dry *Sida* plant locally known as *Alutha*, and a wild variety of the common *Sida rhombifolia* plant also known as *Kattu kurunthotti* in vernacular is used by the *Kurumas* for spreading the fresh dung on the floors of their homes and shrines. The *Kuruma* community believe in after death ceremony and upon the demise of a community member, the practice of serving food items (*sadhya*) with all traditional delicacies to appease the member who has passed away is practiced. Milk of the Wayanad dwarf cow is used to prepare a wide range of dishes for this purpose. Young girls on their first attaining menarche is one of celebration and on a specified date family and relatives are invited for an auspicious gathering wherein the young girl is fed sweet dishes brought by relatives after which she is also fed rice mixed with ghee made from the milk of the Wayanad dwarf cow.

Analysis of the interviews of the respondents shed light on the theme that centred on the belief of the *Kuruma* tribesmen that any shortcuts in preparing delicacies for this purpose would not be appreciated by the deceased and hence the use of culturally prescribed ingredients is strictly adhered to. Analysis of the transcribed interview transcripts revealed recurring themes highlighting the sacredness of wedding rituals among the *Kuruma* tribesmen. Among the various traditions followed, that of providing meals to the groom's relatives on the third day of marriage is more important. On this day, the families of both the bride as well as the groom exchange several delicacies made from the milk of the Wayanad dwarf cow and its products. This exchange is referred to as *Pittuvirunnu* and the *Thalaputtu* and *Madipputtu* are the components of the same. A special item made on for this exchange is a type of ghee flat *dosa* known as *Kellaputtu* (a special type of *dosa* made from rice batter) and the ghee used is that obtained from the milk of the Wayanad dwarf cow milk. This exchange of the ghee *dosa* is called '*dosa kalyanam*' and is a very important part of the marriage rituals of the *Kuruma* tribal people.

The culturally important position assigned to the Wayanad dwarf as a sign of prosperity and auspiciousness was reflected in the theme that were recurrent on analysis of the transcribed interview transcripts that centred on the believe that a family that owned a dwarf cow would never be plagued by hunger and families with more animals were richer. This belief is the result of the inextricable role that this animal plays in both the social, cultural, physical and economic life of the *Kuruma* tribesmen. The entire life world of this community is touched by some aspect of this small animal that is indispensable to their life world. During the division of their ancestral properties to the next generation, animals are also treated as valuable property and are divided as per their customary law,

The *Kuruma* community is rich in terms of its cultural forms and practices. The art forms they practice include *kolkali*, and *vattakali*. *Narikuthu* was another important art form practiced by them. It is not a festival, but a celebration of victory after a rather adventurous hunting. This practice of *Narikuthu* is related to cattle and the livelihood of the *Kurumas* since wild animals are a significant threat to cattle. *Narikuthu* used to be celebrated after capturing the problematic wild animal using a net at night after which and the community gathered around the captured animal singing and dancing. The song that they used to sing on such occasions is commonly referred to as the *narikuthu/ anchadi pattu* and this was sung through the night. All *Kuruma* communities do not practice *narikuthu*. This custom is prevalent in areas where wild animal attacks are prevalent. But today this ritual hunting is not practiced due to restrictions under the Wildlife Protection Act, 1972.

Discussion

The inextricable link of the Wayanad Dwarf cattle with the cultural way of life that revolved around the traditional rice cultivation cycle was also a recurring theme high lighting the links between the Wayanad dwarf cow and the practices associated with the preservation of the traditional rice fields. Apart from paddy, other traditionally cultivated crops such as ginger, turmeric, coffee and pepper also required the dung and urine of the Wayanad dwarf cow as important

sources of manure. A better understanding of these systems could help in equipping farmers with appropriate tools to cope with the challenges posed by changing climatic conditions, making their farming practices more resilient and sustainable in the face of these adversities (Jyothi and Vijayabhinandana, 2024) ^[15]. Analysis of the interview transcripts revealed that secondary underlying reasons for rearing the Wayanad dwarf cattle were for subsistence and as a source of livelihood. Similar findings were made by Mitu *et al.* (2023) ^[18] who observed that livestock are important for resource poor rural households in that they provide a variety of functions that include power for cropping, transport, threshing, and oilseed crushing, manure as a source of fertilizer and fuel, a ready source of cash, and milk and meat for consumption. So also, Pravallika and Mazhar (2021) ^[22], also reported that people in rural areas depend heavily on natural resources such as local water supplies and agricultural land. Similarly, Goswami and Biswas (2021) ^[13] also reported that livestock farming played a significant role in supplementing family income and gainful employment in rural sector, particularly, among poor farmers.

Analysis of the data transcripts indicated the recurring theme that though the female Wayanad dwarf cow in all its stages was given a special position on their hamlets, the practice of attributing any divine character or nature to the female Wayanad dwarf cow was not practiced by the *Kurumas*. Similar findings were made by previous Somagond *et al.* (2020) ^[27] among the *Soliga* tribesmen of the outer parts of the hilly forest areas of Bili Giri Rangana Hills and Mahadeshwara Hills of Chamarajanagar district of Karnataka and by Dash and Sethi (2007) ^[9] who reported the use of dung on the agricultural field of the tribal communities engaged in rearing these animals as well as the sale of male animals and dung as a source of income. The findings of the present study were also corroborated with those of Chakrabarti *et al.* (2020) ^[31] among tribal farmers of Saraitoli village of Ranchi district of Jharkhand state where farmers reportedly reared cows for draft purposes as well as for valuable cow dung and they also sold calves for their livelihood.

Recurring themes that emerged during the analysis of the transcripts of interviews with the respondents indicated that the Wayanad dwarf cow was equated with the heritage and culture of the *Kuruma* tribe folk; protection and preservation of this animal, to the *Kurumas* meant the protection and cultivation of their heritage and culture. Important cultural concepts of wealth in terms of the perception of the *Kuruma* tribe people also emerged from the information generated through the analysis of the transcribed interviews that shed light on the important symbolic meaning of wealth that was ascribed to the Wayanad dwarf cow so that the wealth of a *Kuruma* family or hamlet was calculated in terms of its population of the Wayanad dwarf cow which was in line with the findings of Dash and Sethi (2007) ^[9] who observed that the *Koya* tribesmen also equated prestige and social standing with the number of native *Motu* cows on a household. Saikia and Chauhan (2021) ^[24] observed that the tribal population of India was an important part of her social fabric. The *Kuruma* community is no exception, being rich in terms of its cultural forms and practices. The art forms they practice include *kolkali*, and *vattakali*. *Narikuthu* was

another important art form practiced by them.

Though the *Kuruma* tribesmen sold their male animals for meat purposes they themselves would never and do not slaughter their animals for meat purposes or use the meat of their animals for ceremonial purposes. This was in contrast to the findings of Somagond *et al.* (2020) ^[27] who observed that the *Soliga* tribesmen of the forests of Karnataka resorted to slaughter of their live animals and sale of meat within the community during *Soliga* festivals such as *Mari habba*, *Kulemari*, birthday and obituary ceremonies and on Sundays with an arrangement of assembly of 8-10 people as well as the findings of Dash and Sethi (2007) ^[9] who observed that the *Koya* tribesmen slaughtered and consumed the meat of the *Motu* cows that they reared and they even had the practice of consuming the dead animal.

The importance of local breeds in the promotion sustainable models of development founded on tradition was highlighted by Gandini and Vila (2003) ^[12] who observed that despite the fact that a few breeds were promoted in Europe in the early 20th century, the old local breeds of Europe continue to be farmed in certain areas because of the significant contribution of these breeds, in various environments, to humans in the form of work, food, raw materials for textiles and artisan crafts and fertilizers. The cultural value of local breeds is important as these values are linked to the need to preserve such breeds because they reflect the long history of symbiosis with humankind. The results of this study shed light on the cultural functions of the Wayanad dwarf native cows and their association with aspects of the culture of the *Kurumas* such as the the rituals and festivals of the *Kuruma* community where in the milk of the native cow played a crucial role in the ceremonies of the traditional family temples, the *Daivappura* during traditional festivals like *Uchchal* and *Thulampathu*; the gastronomical cultural significance of the food delicacies prepared from the milk of this animal such as *Mulayaripayasam*, traditionally made *dosa* for use during ceremonies relating to wedding, death and the coming of age ceremonies of young girls (menarche) as well as the use of dung of these animals to signal purity and auspiciousness by using it for the floors of homes all highlight the inextricable role of this animal in preserving the cultural heritage of these indigenous people. Fraoua (1986) ^[11] observed that cultural property could be defined as the property held by a state that was important for the archaeology, prehistory, history of art or science. This concept of cultural property is very significant in the world scene today especially against the backdrop of the 'accepted and pushed' models of development that link privileges to technology and economy thus fostering the rapid disappearance of entire cultural *facies* (faces, forms, appearances) that have been present for centuries. This disappearance of entire cultural faces of communities and landscapes was described as cultural impoverishment by Yudhishtir (1986) ^[32]. Gandini and Villa (2003) ^[12] observed thus proposed that a local livestock breed could, in principle, be considered as cultural property on account of the fact that this breed was, even today, a point of reference in ancient local traditions, and thus a '*custodian of local traditions*'. The authors further argued that this is because the central role that local breeds have played in the agricultural system of an area as well as the social life of

rural populations makes them valuable evidence of the history of the farming of such areas. Other important factors that make a local breed considered as the cultural property is on account of the cultural value of typical products of animal origin that have originated from a specific local breed, farming method or area and have over time become part of the way of life and the gastronomic traditions, the religious and civic festivals of the area or the people (Morand-Fehr *et al.*, 1998) ^[19]. Thus, the results of the present study highlighting the cultural attributes and roles of the Wayanad dwarf cattle stress upon the grounds for considering the Wayanad Dwarf cattle as a cultural property of the State.

Conclusion

The aforementioned results and discussion point to the crucial position that the Wayanad Dwarf cattle play in the life world of the *Kurumas* of Wayanad. These results point to the need for participatory community-based conservation projects that would involve the community in the preservation of this native cattle.

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Declaration of competing interests

The authors declare that there are no competing interests.

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