

How Dolphins Shape Fishing Villages: A Case Study of the Human-Dolphin Relationship in Sanniang Bay

Jiayi Li

*Department of Anthropology, University of California, Santa Barbara, USA
alex_li@ucsb.edu*

Abstract. Changes to natural habitat are one of the leading causes of species decline. This makes the human-nature relationship more critical and it is important to ask how environmental anthropology operates in such a situation. Sanniang Bay is a representative tourism region where dolphins are native in China, this paper takes Sanniang Bay as a case to analyze the connection of human and dolphin in this fishing village. An anthropological approach was adopted in the research, which focused on how dolphins become a crucial element of local culture, social identity, and everyday life. In addition, as tourist activities, such as dolphin watching, are booming, the paper also deals with how dolphins take on a new role in tourist attraction and tourism promotion. This study argues that the dolphins in Sanniang Bay are not just marine creatures but also an expression and symbol of societal culture and local rituals. Besides, the dramatic tourism development makes human-dolphin significance. The Sanniang Bay case study illustrates the transformative power of animals on human culture and extends theoretical and practical understanding of how to nurture sustainable relations among humans, animals and environment.

Keywords: Dolphin-Human Relationship, Sanniang Bay, Multispecies Ethnography

1. Introduction

The manner in which people engage with different species can be analyzed to examine the ethical implications and the building blocks of society. Such studies have been of great interest to many scholars. The relationships people have with animals have been described by some anthropologists as suggesting how people ought to view animals as worthy of recognition as individuals and at the same time, how animals have been, and still are, an integral part of social structure, social organization and social identity [1]. As a result of the investigation of these relationships in various circumstances and different historical times, people will better understand how their social practices and social behaviors have been influenced by their relations with animals through domestication, or even their mere existence. Indigenous and local people in Alaska steward salmon as part of their culture, social identity, and values. Native Americans, especially those who grew up in the Great Plains, see bison as an integral part of their cultural history [2]. Both serve as great examples and help shed light on the human-animal relationship. Research has shown that a positive, mutualistic relationship between humans and animals can improve the health of both species [3]. In such relationships, animals are not treated as indifferent species, but as beings with a unique perspective,

just like humans. By research on the mutual relationships between human and nature or human and animals, the anthropological approach emphasizes the situation that how researchers explore the nature as an integral part of the social world. Sanniang Bay is in Qinzhou City, Guangxi Province, home to one of the largest settlements of the Zhuang ethnic minority in China. Sanniang Bay's Chinese White Dolphins are drawing more and more visitors, luring many to dolphin sightseeing tours and interactions. The dolphins affect the fishing and marine economies of San Niang Bay, but even more so, the local culture and the culture of the fishermen. As a result, many dolphin related souvenirs, statues, and products can be found throughout the area. Therefore, this paper aims to explore the interactions between humans and dolphins by discussing how dolphins are integrated into Sanniang Bay. As a part of the local people's cultural identity, this research illustrates the impact of tourism activities on the lives and cultural traditions of local fishermen. Overall, this paper explains the relationship between humans and dolphins in Sanniang Bay, and how it shapes local culture and traditions positively and negatively.

2. Literature review

Anthropologists from different backgrounds have conducted extensive studies on human-animal relationships and have developed a theoretical framework for ideal relationships.

Rault et al. stated that a positive human and animal relationship is one in which the animal actively approaches the human and exhibits friendliness and positive emotional states, and further stated that a positive HAR can be established and maintained between the two sides [4]. They maintain that animals experience psychological advantages from contacts with human beings and that they have emotional and perceptual capacities. Their studies, however, are restricted to domesticated animals and do not include wild populations, so the human-wild animal interface (i.e., dolphins) merits additional investigation. Mullin's analysis reveals that earlier research on the human-animal relationship focused on trust and interdependence, rather than on control and domination. This shift in the relation suggests that humans are increasingly considering animals as one of the resources rather than merely as fellow species with which they share the planet [5]. This point of view clearly stated the need to reconsider the relation between humans and animals. The animal's importance to human beings and the environment from various points of view depended on could be used to make humans and animals live together in harmony better. It is only with this kind of relationship that a more harmonious, stable and sustainable human-animal, if not human-natural, relationship can be formed. The example of Sanniang Bay is a case study, which illustrates and seeks to probe a deeper, more genuine connection between humans and nature and supports the model ideal depiction of the human-animal relationship as established and elaborated upon in earlier research.

Several detailed case studies have been conducted on particular human-animal interactions in different regions of the world. The article by Esquible discusses how the salmon is in Alaska considered an extremely significant species in both cultural tradition and commercial fishing industry [6]. Salmon is more than a food source; it's a species that defines the way of life in many local communities. While this research topic has areas that can be studied in parallel, the approaches are not the same. The article by Esquible mainly summarizes and discusses the evidence that she formulated in Alaska. The findings of her research specifically pertain to Alaska and may not be applicable to other areas. Therefore, this article will employ Sanniang Bay as an a case study for exploring on the multiple sites of her work. Hough also carried out a case analysis of human-animal relations with bison, and she revealed how these creatures came to define the cultures of early North American peoples, by way of a reliable supply of meat, various materials, and mobility

[2]. It is also another example of how an animal could potentially maintain such cultural relevance for a group of people, solidifying the belief that animals are not simply a means of economic and commercial use. Yet the authors interpreted the relationship through an archaeological rather than an anthropological lens, referencing mainly archaeological data showing that bison and native americans coexisted.

It is also important to know what research has been done on the Indo-Pacific humpback Dolphins. Zhang et al. conducted research on dolphins off the coast of Xiamen Bay and noted that human activities have significantly affected marine biodiversity, the marine environment, and animal populations, including the Chinese White Dolphins [7]. The authors' research emphasizes the ecological perspectives, which tend to overshadow the importance of culture and its influence on the human dolphin interaction, which is a limitation of their research. Huang et al. articulate the potential threats to these dolphins, which include land reclamation, embankment construction, shoreline armoring, harbor construction, and marine farming [8]. Most of their research on the human-dolphin relationship demonstrates that urban development has adversely affected the dolphins' means of survival, while the cultural dimensions have been ignored. Pardalis et al. examine the dwindling marine populations, while noting the extent to which these creatures have been affected by human activities [9]. It is important to articulate the constructive relationships that ought to exist between marine creatures, although few case studies advance this idea.

Along with studies of Indo-Pacific humpback dolphins, the human-dolphin interaction is studied extensively. Wu et al. concentrate on the use of photo-identification, GPS tracking and other survey methods to show how the rapid urbanization and industrialization negatively affect dolphins [10]. Jia's project examines the impact of persistent organic pollutants on the immune and endocrine systems of dolphins [11]. Jefferson et al. discuss how land reclamation is contributing to the loss of dolphins. Jefferson et al indicates that land reclamation is contributing to the decline of dolphin populations [12]. Lu et al. proposed several strategies for maintaining harmony between humans and dolphins, such as keeping a safe distance and controlling speed when navigating dolphin habitats. Different and innovative strategies and measures are urgently needed because human activities are actively harming marine species and causing their population declines, including the endemic dolphins [13]. Adopting a different perspective, Wu et al.'s research shows how humans respond or change their behaviors in response to the presence of dolphins, focusing on how dolphin-watching in Sanniang Bay, Guangxi, China, can replace traditional fishing as a sustainable economic alternative while promoting the conservation of the Indo-Pacific humpback dolphins [10].

Recently, there has been a growing interest in the relationship between humans and dolphins, or between humans and nature more generally. However, current research focuses primarily on economic impacts, thus neglecting the cultural and social dimensions, which is an area that this paper aims to address. Overall, looking at existing research that are focused on building theoretical framework for human-animal relationship, specific ways in which animals impact humans and vice versa, and information known about the Indo-Pacific dolphins, this research will be targeted at filling the gaps of cultural implications that Indo-Pacific humpback dolphins have on local fishermen at Sanniang Bay to further the discussion of human-animal relationships in the realm of anthropology.

3. Multispecies ethnography perspective

Multispecies ethnography is the theoretical underpinning of this paper as it allows for an analysis of cultural and social factors in play in the Sanniang Bay. Multispecies ethnography is an anthropological approach that challenges the imperative to focus on humans alone by expanding its

gaze on the doing and relating of humans and other life forms. It subverts the dominant anthropocentric sensibilities by foregrounding the agency and view of non-human entities in the making of social and cultural matters. This is the only multispecies ethnography that can address the human-dolphin relationship in Sanniang Bay and the importance of dolphins to human culture.

The meaning of multispecies ethnography is to highlight that natural creators have an important role in shaping societies and motivate researchers to recognize every life in the nature as contributing equally and has a role to act [14]. This perspective draws attention to the intertwined relationship between humans and nature and calls for the public to recognize animals as social actors with meaningful existences as opposed to the role of being background to the environment. As with Thomsen et al.'s definition it recognises the importance of nonhumans having rights, agency and welfare in multispecies entrepreneurship, viewing them as co-equal partners [15]. In short, it is the human who should be the agent to construct and promote a harmonious relationship between human and animal. And even more importantly, we as inhabitants of this shared planet should have an obligation to treat them with respect and dignity.

The conceptualisation of multispecies ethnography provides anthropological understanding of humans and ecology relationship in Sanniang Bay, which at least partially accounts for the long-term co-existence of dolphins and community dwellers. Firstly, from a multispecies ethnographic perspective, this paper argues that dolphins are not only creatures of nature but also play an unplaceable role in promoting a harmonious relationship between humans and nature. In fact, this paper treats dolphins as equal entities and as human agents, preventing any potential human biases from skewing the results or the study's objective. Secondly, the influence of dolphins on human society and culture is evident in Sanniang Bay. As a cultural symbol, the Dolphin performs well in shaping the traditions and customs of generations in this fish village.

The introduction to the multi-species ethnography narrates the relationship between human beings and dolphin populations, exploring the bonds with other species and their cultural significance to fishing village populations. It then extends to the anthropological realm of the conversation surrounding how humans, including *Homo sapiens*, have interacted with animals throughout history.

4. Discussion

4.1. Dolphins: from natural creatures to social actors

In the context of multispecies, Chinese white dolphins are viewed as more than just natural entities; they also play a role as social beings and can provide some degree of meaningful value in the eyes of all. The dolphins at Sanniang Bay are found throughout the year. Over numerous generations dolphins have evolved into agile and capable creatures with the potential to establish an intense level of emotional connection to those of their own community. Gentle appreciation for each other between humans and dolphins has led to a profound degree of interdependence; consequently, they are both unable to survive without the assistance of one another. Through this continual interaction between humans and dolphins, dolphins have evolved from mere animals to individuals who occupy socially significant roles, and their mere existence is of great value in guiding, and instructing locals' ability to produce and earn an income from living marine resources.

Through observation and by physically sharing the ocean, local villagers engage with the dolphins daily. The role of dolphins in San Niang Bay is not a recent phenomenon. The long-term coexistence between humans and dolphins helps local fishers with their daily activities. Through watching dolphins, they can predict the state of the sea. When the fishermen get to know the

dolphins better, they can make some rough estimates about fishing by noticing dolphin changes in swimming routes and behaviour or habits while fishing. They can quickly understand the ecological situation and respond accordingly if there are unexpected situations. For instance, if the fishers don't see many dolphins on a certain day, the local people will assume that the water is churning and that a storm might be on its way. In addition, good places to spot dolphins many times in the same area may be good places to get good fish or places with good environments. Thus, the activity level of dolphins and their presence are significant indicators of the production activities of the local villagers, further confirming the essential role of dolphins in human life.

Using a multispecies perspective, it can reasonably be shown that dolphins' behaviors actively influence and shape human behavior and perspectives at Sanniang Bay, inviting societies to reconsider humans' role in nature. While humans may be the dominant force with sophisticated knowledge and technologies that animals lack, animals also play a crucial role in the society. Like in Sanniang Bay, humans remain frequently reliant on animals for their outlooks, being, and know-how. So given the circumstances, the only just and sensible thing that could be done was to give them a bit of respect and dignity. The human has to be removed from ecological and social dominance over nonhuman kin and the two recognized as co-equal within this shared milieu, is precisely what a multispecies politics advocates. At Sanniang Bay, the co-participation underscores how both local villagers and the Chinese White Dolphins contribute to producing a stable ecological ecosystem in the coastal environment.

4.2. Dolphins and fishermen: cultural identity and local symbolism

A multispecies view also enables the public to appreciate the cultural and identity imprints these dolphins have inscribed upon humans. First of all, it is necessary to know what culture is and how it can be formed. What has been argued in this article is that culture is generated not simply through human-to-human communication but also through non-human interventions. In this sense, humans and non-humans are equally relevant in the construction and continuance of particular forms of culture. At Sanniang Bay, dolphins profoundly influence the local village culture, and cultural awareness has developed through long-term cohabitation.

Dolphins, certainly, are almost always mentioned in passing chats, stories, and gossip. Strolling down the street, tourists will overhear people boasting about how many dolphins they came across today, chatting about their encounters with the dolphins, or trying to sell their dolphin-touring business to tourists. In this enduring account, male human-cetacean narratives, dolphins have long since become an intrinsic part of the fabric of cultural memory, a totem that everyone will recognize. Indeed, for those who are unfamiliar, the first thing that comes to their mind when talking about Sanniang Bay, is probably the dolphins.

Moreover, dolphins represent luck, fortune, happiness and prosperity. This is true both globally and locally. Globally, many associate this word cute with dolphins. They are shaped by the tourists when they see dolphins swimming in the sea, they always want to have that kind of excitement. Locally, this article focuses on how dolphins are constructed in local narratives. Therefore, even the souvenirs and statues are dolphin-themed, and so are the adverts, and they're all so keen and positive about dolphins. The deliberate depiction implies a positive local attitude towards the dolphins, allowing them to be interpreted as a potent symbol of luck and happiness. Hence dolphins are not just mascots that are employed for the tourist attraction; rather they show how locals are unconsciously supporting them as cultural symbols and by extension a collective identity.

4.3. The dual impact of the human-dolphin relationship

The relationship between humans and dolphins in Sanniang Bay is not a harmonious or mutual synergy; it is, rather, an interspecies dynamic ecological entanglement, with advantages for each species and possible threats to both. The thesis of this paper will explore the viability of humans and dolphins coexisting in Sanniang Bay, where they work together toward mutual good. The first of the obvious reasons for the local value of dolphins is that dolphin watching has become a major source of tourism in Sanniang Bay and attracts thousands of visitors each year. This provides local fishermen and residents with a highly stable source of income. Beyond their economic value, dolphins are valuable ecological indicators of the ocean environment. For instance, local fishermen can infer about environmental changes and fishery resources just based on watching the abundance or absence of dolphins for a few moments. On the other hand, it is worth considering whether dolphins can gain any specific benefits from humans and what those benefits might be. Even using a multi-species theory and perspective, this paper found no clear benefits, which may be due to a lack of communication channels. Maybe there is something that dolphin relies off of human, but due to this language barrier, no substantial and conclusive evidence can be drawn. Even so, multispecies theory pushes everyone to think about this corner from a bit of an angle. Without proof that dolphins do humans any favors, it can be recognized that dolphins and humans are co-dominants in this particular coastal area. Rather than rushing to label human-dolphin interactions in Sanniang Bay as mutualistic or exploitative, researchers might attend to the dependence between the two that comes from joint space and environmental intertwinement. It doesn't matter whether dolphins benefit humans; what is certain is that having dolphins is necessary for humans to share an environment.

In sum, there is much to learn about the human-dolphin relationship from the perspectives of multispecies theory and ethnography. As dolphins have many practical benefits for the local people, this article takes the role of a vehicle for social and cultural value in regards to how they contribute to both their practical lives as well as their cultural lives. There is certainly a renewed discussion about the relationship of dolphins to humans in Sanniang Bay and the continued potential of humans and nature to coexist through the examination of the relationship. The argument of the article will be that instead of debating the relationship of symbiosis or parasitism between humans and dolphins, it is more important to examine how the various collective forces of Sanniang Bay's coastal ecology are functioning.

5. Significances and implications

This paper provides a growing body of research regarding the cultural, anthropological, and theoretical perspectives of small, close-knit fishing communities. These communities exhibit more robust cultural practices and affinities to the sea than do larger fishing villages. Sanniang Bay is a unique ecological location because it is one of the few locations in the world that one can observe the Indo-Pacific humpback dolphin, a species that is one of the world's endangered species. As a result of the unique ecological environment, Sanniang Bay fishermen have constructed a dolphin-centered belief system that reveres and shows great cultural significance to the dolphins. Humpback dolphins are living creatures of the ocean and, in addition to being valued for this, they are also valued as ritualistic entities in the culture, integrated with local customs and practices, and with the economy. In this research, the author examines the Sanniang Bay seaside village and offer insights relating to the themes of tourism, environmental change, and the rearticulation of traditional cultural

meaning; Moreover, this paper also studies how, through the practice of coexistence, the presence of dolphins has facilitated the development of a new culture for the people of the community.

This case study, from a living fisherman's perspective, is part of anthropological discourse concerning fishermen and their interactions with nature. Anthropologists have been interested in how the environment affects the behaviour, culture, and ways of living of populations. Based on research of villagers coexisting with dolphins in Sanniang Bay, the article investigates the dramatic way an animal can shape human behavior, not just culturally, but practically. Linking ecotourism, economic benefit, and local views, the study examines how everyday priorities and lifeways, such as fishing regimes, awareness of breeding cycles, and day-to-day dealings with the sea, such as on marine territories where the dolphins become in sea, are affected by their presence, examines how human practices and community organization are influenced by both opportunities and environmental limitations. Overall, the study contributes to and reflects on environmental anthropological debates about how people respond to, live with, and act toward the nature, resources, and species that constitute the world in which humans live out their lives.

Besides, this study is theoretically about human-animal, human-environment, or human-nature relations, but through an as-yet-unresearched species. This theoretical framework has long been argued in anthropology, ecology, and even biology. With environmental changes happening so fast and many animal populations declining worldwide, it's important to reconsider the current relationship with the natural world and figure out better ways to live in the future. The human-dolphin interactions at Sanniang Bay are therefore expected to provide a worthwhile case to advance conceptualizing models of coexistence and reciprocity.

Applying multispecies theory to Sanniang Bay has important theoretical implications. First, it contributes to the development of this multispecies theory by illustrating site-specific application. Be that as it may, the theoretical scaffolding has long been established in around theory. This research will advance it by showing how transferring such an ontology to the Chinese White Dolphins and reading them as agentive entities can augment humans' ontological understanding of nature and non-human animals. The actionable insights derived from multispecies theory suggest that it is not merely an abstract idea but a feasible, productive methodological approach. In addition, this article contributes to advancing multispecies theory and to challenging human exceptionalism. In and through the Sanniang Bay case, this paper reinforces that in anthropological inquiry humans are never the only operators. Researchers need to take nonhuman species and organisms into account if they would like to gain more comprehensive insights into the subject matter of the study. Thirdly, multispecies theory challenges researchers to rethink how culture is conceptualized and its place within materiality. Building on this framework, this article proposes that human culture is not constructed solely through human-human interaction, but that human-animal bonds are also implicated in the construction of culture. When considering cultural identity, traditions, practices, and influences, the anthropologist must assess how nature may be mobilized as an agent, influenced by enduring human-animal and human-nature practices. In conclusion, the paper offers a more nuanced insight into human-animal-entwined and human-nature connectedness. Hence, the profound interdependence between human and Chinese white dolphins at Sanniang Bay is more than a matter of interaction or coexistence. The profound cultural influence the dolphins have on the villagers suggests a degree of interdependence. By dint of everyday interfacing, inhabiting common localities, and sharing know-how, dolphins actively influence and shape local livelihoods, perceptions of the environment, and cultural expression, as much as humans modify the terms of the shared marine margins. This changing dynamic discloses the layered nature of human-nature

relations and the multifariousness of multispecies life. Therefore, when discussing environmental concerns, such as conservation, it is vital to consider animals' contributions to human life.

6. Conclusion

This paper uses Sanniang Bay as a case study to understand the interrelation of the local community and the Chinese white dolphins. Employing multispecies theory, the author appreciates dolphins as social agents with consequential social relationships with the local community. Additionally, the author argues that from the perspective of the local community, dolphins represent deep cultural value as carriers of good fortune, luck, and happiness, values woven into local cultural practices and daily routines of the villagers. Yet there are several limitations that this paper has. First, the absence of ethnography and limited time spent at Sanniang Bay means that critical cultural dimensions are not addressed and understood comprehensively. Consequently, this study presents only a basic framework regarding the cultural dimensions and methodologies to study the rationale for human-nature or human-animal interactions. Secondly, the paper neglects the presence of other species, both biotic and abiotic, in Sanniang Bay as the author emphasizes solely on the dolphins and the human-animal bond. Thirdly, the scope of this research is limited. Although the methodologies can be applied directly to other locations, the finding is only applicable to the Sanniang Bay site. As a result, future research can build off of this methodology and examine the real cultural implications of dolphins for local villagers through ethnography, supplement the structural analysis presented here, and apply this multispecies theory to other sites where it may be applicable.

References

- [1] Clark, J. N. (2024). Human-animal connections: expanding and cross-worlding relational approaches to resilience. *Environmental Sociology*, 10(2), 147-161.
- [2] Hough, W. (1930). The bison as a factor in ancient American culture history. *The Scientific Monthly*, 30(4), 315-319.
- [3] Capela e Silva, F., Kieson, E., Stergiou, A. N., & Pereira-Figueiredo, I. (2024). How animals affect us: examining the influence of human-animal interactions on human's health. *Frontiers in Veterinary Science*, 11, 1509960.
- [4] Rault, J. L., Waiblinger, S., Boivin, X., & Hemsworth, P. (2020). The power of a positive human-animal relationship for animal welfare. *Frontiers in veterinary science*, 7, 590867.
- [5] Mullin, M. H. (1999). Mirrors and windows: sociocultural studies of human-animal relationships. *Annual review of anthropology*, 28(1), 201-224.
- [6] Esquible, J., Hoffman, A., Lowrey, D., Ropati, D., Cleveland, J., Williams, M., ... & Carothers, C. (2024). Aulukluki neqkat: centering care of salmon and relational research in Indigenous fisheries in the Kuskokwim River, Alaska. *Arctic Science*, 10(2), 349-371.
- [7] Zhang, Y., Zeng, Q., Turvey, S. T., Zhao, L., Yong, L., Lu, X., & Wang, X. (2025). Rapid habitat fragmentation and niche shifting of an estuarine dolphin driven by coastal urbanization. *Global Ecology and Conservation*, 58, e03448.
- [8] Huang, S. L., Wang, X., Wu, H., Peng, C., & Jefferson, T. A. (2022). Habitat protection planning for Indo-Pacific humpback dolphins (*Sousa chinensis*) in deteriorating environments: Knowledge gaps and recommendations for action. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 32(1), 171-185.
- [9] Pardalis, S., Exadactylos, A., Komnenou, A., Drouga, A., Akritopoulou, E., Sarantopoulou, J., & Gkafas, G. (2024). Threats on Marine Mammals: An Anthropological Perspective. *Global Journal of Archaeology & Anthropology*, 13(4), 555869.
- [10] Wu, H., Luo, F., Huang, S. L., Wang, J., Ling, Y., Lin, M., & Peng, C. (2024). Replacing artisanal fisheries with dolphin watching: Strategy for conservation and sustainable community-based marine ecotourism. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 34(4), e4156.
- [11] Jia, K., Ding, L., Zhang, L., Zhang, M., Yi, M., & Wu, Y. (2015). In vitro assessment of environmental stress of persistent organic pollutants on the Indo-Pacific humpback dolphin. *Toxicology in Vitro*, 30(1), 529-535.

- [12] Jefferson, T. A., Becker, E. A., & Huang, S. L. (2023). Influences of natural and anthropogenic habitat variables on Indo-Pacific humpback dolphins *Sousa chinensis* in Hong Kong. *Endangered Species Research*, 51, 143-160.
- [13] Lu, Y., Zhuo, H., Li, H., Xu, X., & Yang, G. (2025). Diving pattern and behavioral response to vessel traffic of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Xiamen, China: implications for conservation. *Nature Conservation*, 60, 125-138.
- [14] Toncheva, S., Perry, J., & Fletcher, R. (2025). Multispecies constitutionality: Governing human-wildlife interaction beyond anthropocentrism. *International Journal of the Commons*, 19(1).
- [15] Thomsen, B., Vassallo, J., Wright, C., Chen, S., Thomsen, J., Villar, D., & Muurlink, O. (2024). Reimagining entrepreneurship in the Anthropocene through a multispecies relations approach. *Journal of Business Venturing Insights*, 22, e00507.