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Reflections From the Field: Conducting Culturally Immersive Field Research as an Interdisciplinary Researcher

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Abstract

Navigating field research that involves collecting qualitative and quantitative data can be difficult. The added layer of cultural immersion, language barriers, and economic disparities creates additional challenges to what may already be an arduous undertaking. In this article, I reflect on my professional and personal experiences of conducting field research in Chilika Lagoon, India, where I applied an interdisciplinary approach to examining significant fish species for Chilika fishers. Further, I discuss acclimatizing to a field setting and the difficulties I faced in a cross-cultural research context. These challenges and experiences helped me recognize the importance of community support, adaptability, and willingness to learn when conducting cross-cultural research. I conclude with insights for future researchers to consider within a new context.

Keywords

Chilika Lagoon; cross-cultural research; ethnography; interdisciplinary

1. Introduction

Increasingly, natural scientists are undertaking interdisciplinary research or engaging with social sciences research because of the recognition that environmental issues have significant human implications (Martin, 2020). Diverse representation among researchers is important when considering inclusive solutions. Findings have supported that interdisciplinary research can have inherent challenges, including longer time periods to complete work because researchers must understand multiple disciplinary languages, spend time

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building trust with diverse partners, and often progress through steep learning curves (Andrews et al., 2020; Nyboer et al., 2023). Patience, open-mindedness, embracing complexity, and stepping outside one's comfort zone are important in interdisciplinary work (Kelly et al., 2019).

I found that an added dimension to performing some interdisciplinarity research is carrying out cross-cultural research when language barriers are prevalent. Many of these cross-cultural research studies take place within a developing country, which is a shift from the previously dominant WEIRD emphasis (White, Educated, Industrialized, Rich, Democratic), and has been written about within psychology, health sciences, and anthropology (Broesch et al., 2020; Kowal, 2024). Many marine disciplines have conducted research in developing countries, and critiques surrounding this work have been centered around the extractive modes of knowledge production (de Vos, 2020; Martins, 2020; Stefanoudis et al., 2021). When these modes are present, the research is propelled forward by outsiders' motives and assumptions, and creates unequal power imbalances between locals and outsiders (de Vos, 2020). It also results in hampering local conservation initiatives because of the increased reliance on external partners.

This article is written for early-career researchers working with local communities in a cross-cultural and fisheries context, based on my PhD experiences. My research was cross-cultural and interdisciplinary, with both aspects presenting significant personal and professional challenges. This work took place in the Chilika Lagoon region in eastern India (Figure 1). The Chilika region is characterized by high biodiversity, including over 175 bird, 225 fish, 28 shrimp/prawn, and 35 crab species (L. Nayak et al., 2016). The caste system is also prominent, wherein fishing occupation was historically predetermined by positioning in the Hindu Varna (caste) system (P. K. Nayak, 2014). When I entered the field, many aspects of living in Chilika Lagoon were new to me. The experience I envisioned was different from what it was. I not only learned to acclimatize to the personal aspects of living in the local communities, but also how to carry out research alongside a research assistant (RA) within a cross-cultural context—something I had never done before.

My upbringing and experience shaped this work. I am a brown, English-speaking woman, born into a middle-class family. My mum is Pakistani, and my dad is Indian, and they were born into lower-income families. Despite my brown skin and familial ties to India, I am an "outsider" in Chilika Lagoon, as I don't have ethnic ties to the participants. The local dialect is Odia, and my research was carried out via an RA native to Chilika, whose English was self-taught. In addition, while my PhD research was interdisciplinary, I came into this degree with 10+ combined years of genetics education, research, and work experience; the social sciences were new to me. Motivations for this shift include the social sciences being a better fit for my values and career goals, wanting to engage with the public and stakeholders, and undertaking impactful research (Shellock et al., 2023).

I applied a community-based approach to my research and worked with an RA local to Chilika (Figure 1). For my RA selection, I deferred to my supervisor. My RA has a rapport with my supervisor and has experience working with other graduate students in Chilika. My research was broadly to understand species of importance for Chilika fishers (Serrao, 2026). To achieve this, I interviewed over 200 fishers across the lagoon, spanning various social and demographic characteristics (age, gender, caste, or social groups). This study was undertaken in three villages, and the criteria used to guide village selection were: (a) mostly comprised of fishers, (b) a different caste is prominent in each village, (c) geographic dispersal between villages, and (d) proximity to major water features (river, canal, sea).



Figure 1. Chilika Lagoon map depicting villages surveyed in 2022–2023.

This research took place between 2022 and 2023, and I lived in the lagoon for over 7.5 months. More specifically, I undertook household surveys (n = 90) to understand what fish species were considered important and why, and photo interview surveys (n = 108) to connect local fish names identified in household surveys to their scientific names (Serrao & Nayak, 2026). I carried out seasonal calendar interviews (n = 48) to understand the months in which various social (marriages, festivals), economic (high income and low income months), and ecological (rain, fish/prawn/crab season, various fish species were caught) events occurred, and lastly I conducted key informant interviews (n = 30) to understand the social and ecological dimensions of species considered to be important by the interviewed fishers (Serrao, 2026). I also undertook a focus group discussion in each of the three study villages to compare indicators for cultural keystone species against the chosen fish (Serrao, 2026). All surveys and interviews were recorded so they could be referenced further. My dissertation committee was made up of two natural scientists and two social scientists. Collectively, they helped guide my research conceptualization, questionnaire development, data analysis and interpretation, writing, and ensuring I was applying terminology appropriately.

In this article, I provide a reflective account of opportunities and considerations when undertaking field research based on my experiences living in Chilika Lagoon for the first time, while grounding my perspectives in literature. I first start by reflecting on what life in Chilika was like from a personal perspective. I then detail some of the implications of undertaking cross-cultural research with an RA, and then discuss navigating research paradigms, ethics, and cultural re-entry. I end by suggesting considerations for early-career researchers. I emphasize here that no one-size-fits-all approach (Broesch et al., 2020) or "correct" way to carry out cross-cultural research exists. My experiences are my own, and my intention is to shine a light on considerations when doing research. My aim is not to reflect on cultural differences, and I hope to encourage researchers (regardless of background, experience, positionality) to be sensitive to the unexpected, and to be open and honest about these challenges.

2. Considerations When Living in a Different Context

Early in my degree, I read about parachute science, and the tendency of researchers from the Global North to "fly into" communities, extract resources and data, and leave without disseminating results (Broesch et al., 2020; Peterson et al., 2025). Despite immersive efforts anthropologists have undertaken in ethnography and increased initiatives to make applied science more self-directed in countries previously colonized by Westerners, challenges remain with developing countries applying colonial government instruments, as well as laws, provisions, and procedures that influence how science is implemented (Genda et al., 2022; Green, 2023). As such, I wanted to involve the local communities throughout the research process, not only to better understand and contextualize my research findings, but also because this aligns with my personal ethics.

To help facilitate this, I lived with host families in or close to my study villages (Sangasubana, 2014); cultural immersion was something I prioritized. I wanted to build personal relationships with individuals from various demographics within the villages. To strive towards intercultural effectiveness, one must be able to live and work well in another culture (Vulpe, 2001). Three main attributes of achieving this include (a) communicating with individuals of a different culture in a way that gains their trust and respect (see Section 2.1), (b) an ability to adapt professional skills that matches local conditions (see Section 3.1), and (c) a way to personally adjust so one is content with the way of life (see Section 2.2; Vulpe, 2001). Another study found that professionals who were able to tolerate ambiguity, had international experience, and had cultural humility had the best cultural response for work-related scenarios (Caligiuri & Caprar, 2023). In addition, accurate interpretations of nonverbal and verbal communication are necessary to achieve intercultural sensitivity, which is important for interacting well across cultures (Barker, 2016). These attributes didn't happen to me overnight and were a work in progress.

2.1. Relationships With Host Families

I lived with three host families in Chilika, and they were compensated for the room and food. I first acknowledge the efforts made by these host families. I was the first "foreign" student to stay with them; it was a learning experience for both sides. Many adjustments were made by the families to ensure my comfort. My first host family created a room for me: It was the biggest and newest-looking one in the house. They installed a second squatting toilet and running water with a tap (in lieu of a sink). They even put a tarp to cover two of the four sides of the open shower space so I would have some privacy while I showered. My supervisor identified accommodations for the first village through his existing contacts in the area. I identified this village as my home base because it was a dependable accommodation. Given that the second and third villages were later in my trip and further geographically, a loose plan was formed to identify accommodations. Accommodation was not identified until we arrived on site.

My relationships with the host families were key to my success as a researcher. A challenge with extended fieldwork is the loneliness in being away from one's support system (Browne & Moffett, 2014). I experienced this at the beginning of my fieldwork, as I tried to navigate both adjustments to field research and living a very different lifestyle. As time went on, I developed close connections, especially with the Chilika women. While much of our communication was non-verbal, or in broken Odia/English, there was much love and care inherent in these interactions, and they provided support during the challenging times.

2.2. Day-To-Day Life in Chilika

I remember the day I arrived in Balabhadrapur, my first host village. I entered my room (few individuals have private rooms) and noticed a wooden bed, without a mattress (which was common in many households I visited). The "living room" was a small open space, and the cooking station was made of mud clay, both of which were located outside. I went to the shower and noted the open-concept nature—the shower was located at the back of the house across from the cooking area, with all sides exposed. Nearby, there was a stone for handwashing clothes. This was overwhelming for me. While I had visited India before, I didn't know what to expect before arriving, beyond bringing a few key items (a bucket, a mug, and a mat for the bed). The first weeks were difficult; however, a key point to emphasize is that when entering a new culture, one's reaction to differences will change, and over time, many people will accept and participate in the local culture (Vulpe, 2001).

Cultural adaptation skills were key to successfully living alongside Chilika fishers, and they are a top competency of interculturally effective people (Vulpe, 2001). It was important for me to personally adjust to my new living conditions so that I could be happy with my new way of life. To achieve this, I tried my best to mirror the Chilika lifestyle—I woke up by 6:30 am, brushed my teeth, took my shower, washed my clothes on the stone, put coconut oil in my hair, and ate breakfast. I quickly learned this all had to be done in a particular order—deviating from it left locals puzzled. For example, while I initially showered in the evening post-fieldwork, I soon learned it was important to do this in the morning because that is customary in the lagoon. I learned much of the daily customs through observations and making mistakes. Even by the end of my time in the lagoon, hand-washing clothes was something I could never perfect, and the aunties were still correcting my technique.

Before entering the field, I didn't recognize that open showers were prevalent in the lagoon. This was an aspect of living in Chilika I struggled with because of the lack of privacy. While taking a shower, I wrapped myself in a gamucha (towel), because the shower space was not enclosed. It was also a time when the mothers and daughters were keen to talk to me, often washing clothes or brushing their teeth alongside me, or cooking just a few steps away. I do recognize, however, that the shower rituals are likely a bonding activity between friends/community members; the few times I went to the *pokiri* (pond), I saw girls washing their clothes, showering in the pond, talking and laughing. It was difficult for me to engage in this way, because I have grown up in a culture where showering is something you do privately.

2.3. Menstruation

The difficulties women face with managing menstrual health in fieldwork still requires more attention; however, these topics are gaining more visibility (Dance et al., 2024; Hamylton et al., 2023; Walker, 2024). Within India, there is an added layer of menstruation being viewed as "dirty" and "impure," and culturally, women may face constraints in daily living because of this (Garg & Anand, 2015). For example, in some rural villages in India, women are not supposed to enter the *puja* (space for worship) room during menstruation (Puri & Kapoor, 2006). A key challenge I experienced was managing menstrual disposal because each host family had its own way of dealing with this; in one village the protocol was to bury waste in the ground by the pond, whereas in the second village, I had to put the waste into a plastic bag and throw it at the back of the house. Having questions in the field regarding menstrual disposal was difficult because of language barriers and cultural stigma.

3. Considerations When Working With an RA and Undertaking Cross-Cultural Research

As part of their approach to cross-cultural research, I found a researcher must decide on the involvement of the RA (Bergen, 2018). This decision can be influenced by fluency of the researcher in spoken languages, research funding, and length of time for research activities (Temple & Young, 2004). Within Chilika Lagoon, English-speaking locals are uncommon; in conducting my field research, I only encountered three English-speaking people, one being my RA. This work wouldn't have been possible without him. Despite previous depictions of a "lone researcher," a lot of qualitative research in a cross-cultural context is accomplished via RAs (Turner, 2010; Wasser & Bresler, 1996). In preparing for my field research, my time was spent on the arduous process of acquiring an Indian visa as a Pakistani person of origin, completing research ethics with human participants, and thinking through research instruments; I didn't fully grasp the importance of the role my RA would play.

A continuum exists in which interpretation can occur; an RA can have "low autonomy" where the researcher works *through* interpreters and interviews are translated verbatim, or "high autonomy" where the researcher works *with* interpreters, who are involved beyond data collection (e.g., recruitment, translation, data analysis), and accordingly requires more financial resources (Baker, 1981; Bergen, 2018). Southern RA's involved in knowledge production are more likely to participate in data collection, provide logistical support, and/or support translation (Martins, 2020). As a first-time researcher in cross-cultural work, the approach I took was "low autonomy," which was guided by my natural sciences training and the emphasis on repeatability, accuracy, and precision—a decision made by myself and not discussed with my supervisor and/or colleagues. In hindsight, I could have engaged with RAs in a more "ethical" way, such as involving them in data analysis, writing, and interpretation, like the sentiments expressed in Bergen (2018).

3.1. An RA as a Cultural Broker

In the literature, an "interpreter" has been defined as someone who is in-person and translates between individuals (Baker, 1981). However, "interpreters" typically do more than translate; they may play a "cultural consultant/broker" role to coordinate interviews, develop rapport with interviewees, arrange accommodations, and provide cultural insights (Temple & Young, 2004; Turner, 2010); accordingly, I have used the term RA.

I relied on my RA extensively. He brought many strengths to the position beyond translations. He ensured all my basic needs (accommodation, food, transportation) were met. I never questioned my physical safety. He was charismatic and convincing and had the gift of recruiting fishers for my study. My RA endured challenging heat conditions to recruit participants when I was unable to in June. He also provided me with cultural education on how to interact with locals. For example, when I met a senior, I would immediately touch their feet to pay respect to them. I would accept food, soft drinks, and gifts from the locals (within reason); I learned this would be perceived as disrespectful if I didn't. My RA was able to strike up conversation with anyone and created a situation where we were warmly accepted by many fishers. He was much more than an interpreter.

3.2. There Is No One "Correct" Translation Approach

It is not my goal to prescribe a translation approach, and there is no one "correct" way. However, the translation process is not something I emphasized before starting my field research, but it is a component I grappled with during the field and post-field. Translation can occur at various parts of the research process, including before data collection (questionnaire), during data collection (participant conversations), data preparation (translating transcripts), data analysis (translating codes and themes), and knowledge dissemination (quote translation; Helmich et al., 2017). Here, I will present the various types of translations reported in the literature and then describe my approach.

Ensuring proper translation of instruments (surveys, interviews) is key to field research success, and approaches already exist. Back-translation or "re-translation" is the most applied approach, and is where an instrument is translated to the original language; the starting version and back-translation are then compared to discuss discrepancies (Behr, 2017), whereas forward translation is the process of translating from an original language to a second language (Phongphanngam & Lach, 2019). Long translation is where, in parallel, a few people produce translations, and someone ultimately selects the version to be used; the instrument is then piloted to determine any discrepancies. This process is lengthy and more costly as it requires additional resources (Kowal, 2024). An ad hoc translation approach consists of a bilingual person or a local with bilingual abilities serving as an ad hoc interpreter and translating a text into a second language (Kowal, 2024). There isn't a true translation of a text, and this is not a "neutral" process; a reader develops an understanding of the text by referencing their own interpretation of contexts based on lived experiences (Bergen, 2018; Temple & Young, 2004; Wong & Poon, 2010).

My RA provided on-the-spot translation. Upon returning to Canada, I wanted the interviews to be transcribed because my RA provided a summary due to time constraints, whereas I preferred detailed translations for my analysis. I hired a second RA to go through the audio to translate one of my research questions for further coding, which was an arduous process. I cycled through several RAs before I found one who translated to the level of detail I wanted—this added months to my PhD. The second RA was not from Chilika, and it is likely that cultural nuances were missed in translations.

3.3. Researching the Human–Fish Connection as an Interdisciplinary Researcher and an Outsider

An "outsider" is a researcher who doesn't have ethnic ties to their interviewees (etic perspective), while an "insider" is a researcher who does (emic perspective; Kim et al., 2022). Long-standing debates exist on the benefits and drawbacks of either; benefits of an insider include knowledge of the spoken language, trust held by community members, and therefore access to interviewees, while outsiders are said to be more objective and able to observe behaviors more neutrally (Mullings, 1999; Naaeke et al., 2011). Being an outsider can be challenging because trust-building can take time, while the challenges of being an insider are that questions can be asked that interviewees believe RAs should already know the answer to (Naaeke et al., 2011). These "identities" are not static, and they can shift; over time, an "outsider" can gain "insider" status, while an "insider" can be viewed as an "outsider" based on who they interview (Naaeke et al., 2011). I was an "outsider," while my RA likely went between being an "outsider" and an "insider" depending on caste and gender.

3.4. Connection to Place

I didn't grasp the importance of connection to place until data analysis and interpretation. While I have contributed to advancing various academic fields (fish biodiversity in Chilika, naming fish), it was challenging to confirm and probe my findings, and ensure correct interpretation, given my outsider status. For example, I examined the seasonal dimensions of fishing activities (marriage, festivals, rainfall) in three villages. I struggled with data interpretation for festivals, because I didn't have a strong understanding of the cultural significance of these events. This felt like a common thread throughout my field research. Much was missing from my understanding of Chilika fish because there wasn't enough time when conducting interviews for an RA to translate everything.

A process emphasized in Broesch et al. (2020) would have been to return to the field once my data analysis was complete to discuss results and generate novel insights. This could help reduce parachute science and contextualize findings from my seasonal calendar, as well as understanding discrepancies for some fish names across communities. I returned to Chilika in June 2026—three years after completing my fieldwork—to disseminate knowledge. With translation support from my RA and his family, I created a seven-minute video. The general format was that I described my research, provided an overview of the study areas, discussed the main findings, explained why this knowledge is important for both Chilika and globally, talked about my successful PhD completion, and acknowledged everything done for me by the fishers. This experience was so special because I reconnected with people who provided me with their knowledge, time, and hospitality. Everyone was so happy to see my RA and I; the big smiles on their faces will stay with me forever.

3.5. Connection of an RA to Place

An important consideration is the RA's positionality, who, inevitably, held his own biases and assumptions. A missed opportunity was to ask my RA how his identity may have influenced this work, similar to Pasquini and Olaniyan (2004). My RA was a 40+-year-old man belonging to the Khatia caste from Berhampur, the first village I carried out my research in. While he had social connections to Berhampur, he had no social ties to the Naikulapatana and Gajapati Nagar peoples. When considering Gajapati Nagar and the Kandara caste composition, my RA came from a comparatively higher social status. I observed that it was easier for my RA to complete research in Berhampur because of his social ties, and because the other two villages had never encountered foreign researchers. Much of the early days in each village were spent explaining to the locals my research, our identities, and the reason we were collecting information, which seemed tiresome.

3.6. Researcher–RA (and Even Participant) Dynamics

Gender and the researcher–RA relationship are important when interviewing participants. For example, Pasquini and Olaniyan (2004) reflected the benefit of an older male RA accompanying a younger foreign woman in the field, and suggested that if two younger women were present, they may not have been taken seriously in the field. In Pasquini and Olaniyan (2004), the RA indicated that at the start of fieldwork, participants thought it was "demeaning" for the older male RA to be supporting the younger woman researcher. In another example, Rodríguez and Minatti (2024) expressed the challenges of building rapport and access to participants because of having a "local" woman RA working with a foreign male researcher.

Within my research, having a local male researcher who was part of the fishing community was an immense benefit.

Gender also likely played a role during the interviews/surveys, especially with female participants who may not have been as confident in their fish knowledge, being interviewed by a male RA. There were several times when we would ask to interview the woman in a household, the husband or father would say the woman didn't have knowledge about fish. Researcher positionality, RA, and participants all interact, and this needs to be considered in the field (Rodríguez & Minatti, 2024).

Researcher–RA power differences are prevalent, especially where the researcher from the Global North hires a Global South RA for a short time to execute surveys and interviews (Rodríguez & Minatti, 2024). With my upbringing and knowledge of how Indian culture operates, it was challenging for me as a young woman to be assertive in how my research was to be carried out, given that my RA was older, male, and had an abundance of fish knowledge. These dynamics can be hard for both sides because actions can result in consequences that could have negative implications both personally and/or academically, and training isn't readily available on best collaboration practices in the field (Rodríguez & Minatti, 2024). While foreign researchers leave their field site after the work has been completed, "insider" RAs stay and may have to deal with "consequences" of the research, including ruptures to personal relationships and impacts on their reputation (Cadman et al., 2024; Rodríguez & Minatti, 2024).

4. Navigating Research Paradigms, Ethics, Identity, and Cultural Re-Entry

4.1. Sample Sizes

Although sampling approach and sample size are technical subjects, I grappled with sampling approach and sample size for the various surveys and interviews. For the former, my previous work on endangered fish species underscored the importance of intensive sampling of fish and water samples to determine fish presence. Translated to this research, I believed that more samples were needed to capture as much variety as possible, and I initially wanted to undertake 80 per village. I learned that trying to collect genetic samples from fish samples to satisfy an ideal number is different than surveying households; the latter requires relationship-building, time to conduct the survey itself (close to one hour per household), and translating surveys.

I followed a pragmatic research paradigm, which aims to use inquiry to find solutions to specific problems in a real-world context (Feilzer, 2010). Pragmatism follows a mixed-methods approach by collecting both qualitative and quantitative data; the decision of which method to select is based on the researcher's reflection and the best analysis to implement in each situation (Revez & Borges, 2019). For the different types of interviews and surveys, I applied various sampling strategies, including random sampling (household survey and photo interview surveys), convenience sampling (seasonal calendars), and snowball sampling (key informant interviews). Because my previous training in natural sciences was grounded in a positivist research paradigm, it has been an adjustment to move away from this.

I quickly realized random sampling is incredibly difficult to implement. We first acquired a voter list from the village head, which was difficult to access. The voter list contained the local community members' names,

age, and sex. Fishers were distinguished from non-fishers by their last name. My RA wrote everything in English; I entered this information in Excel and used a random number generator to select participants. We had to determine the identity and home of the selected fishers. This was time-consuming; however, the benefits outweighed the drawbacks. After implementing random sampling via a voter list within the RA's village, we visited households he had never been to. Secondly, I never would have understood the degree to which migration took place in Naikulapatana if I had only interviewed fishers based on convenience sampling; most (young and middle-aged) fishers in my shortlist of fishers to interview had migrated to Kerala.

4.2. "Ethics" and Cross-Cultural Research

A research visa from the Indian consulate was needed for my field research. Additionally, I was required to complete an ethics application at my home institution, wherein an institution in the Global North provided clearance to undertake my research in the Global South. The research and data collection procedure was explained via my RA to the locals, and verbal consent was obtained. I struggled with the concept of "consent" and wondered if my participants truly knew what that entailed; my (non-academic) friends and family have a hard time grasping my own research, despite my ability to communicate this via shared language. Similarly, researchers in healthcare have also grappled with "genuine informed consent" in countries that are low-income, because informed consent is culturally bound and unable to be translated cross-culturally (Dugas & Graham, 2011; Durham, 2014). Others working in a low-income context have made independent decisions based not only on ethical principles but also guided by local context (Durham, 2014). Similarly, I have approached knowledge dissemination in academia with the understanding that it is my responsibility to ensure that I communicate information in a way that wouldn't leave communities vulnerable.

4.3. How Personal and Lived Experiences Shaped the Research

My immersive field experience played a large role in shaping my research. Through living with locals, I picked up small pieces of Odia to converse on a limited basis with community members. This also helped me better understand the interviews carried out by my RA. Living in these communities made it easier to carry out my research surveys and interviews. As days passed, enough people became aware of my research and objectives that it was easy to recruit participants because of the time spent with locals. I learned a lot about Chilika life (household responsibilities, religious celebrations, and cultural norms), and these experiences helped contextualize my research findings. Through living with locals, I was able to contextualize interview responses, especially as it pertained to gender roles and finances.

4.3.1. Gender Roles

Living with host families allowed me to see gender dynamics play out, and to understand caste nuances. Women across all castes are responsible for completing household tasks (cooking, cleaning, taking care of the children), while men are responsible for fishing and other sources of income. In the Khatia and Kaibartya castes, women generally stay at home to take care of household responsibilities, whereas in the Kandara caste, it is common for women to support their husbands' fishing and to perform labor work or other income-generating tasks in addition to household responsibilities (Khan et al., 2018). Another observation was that much of the child-rearing responsibilities fall on the women. When women were asked what species they believed to be important, and why, some selected fish with fewer bones so the fish wouldn't

get stuck in their children's throat (Serrao, 2026). In all three households I lived in, men were gone for large portions of the day (or even moved to another state) and were not as present in their children's lives. Many of the men's responses to my research questions were economically driven because of their financial responsibilities towards their families (Serrao, 2026).

4.3.2. Economic Inequalities

Living within the villages put into perspective the income levels reported in the household surveys. It didn't take long to recognize my privilege, and I did my best to minimize any differences in lifestyle and better adjust to the villages. I took local transit where possible, only ate food provided by host families, and tried my best to adapt to living in Chilika. Knott (2019) said it well when she wrote, "These relations are asymmetrical: We may enter the personal lives of our participants, but our participants are less likely to enter our personal lives" (p. 144). As I write this, I recognize I had no issues asking locals about their household income, yet I struggled with showing photos of what my home looked like or how much I paid for my personal belongings.

4.4. "Guilt" as a Researcher

I experienced guilt post-field and during data analysis and interpretation. Guilt is also reported by other researchers in response to project legitimacy, the inability to improve interviewees' lives, and a Western researcher "speaking for the third world" (Steinert et al., 2021). When I experience guilt (and still do), I reflect on the personal relationships I developed with the locals, which is something I prioritized. I learned from, and lived among, Chilika fishers. When I got up, I sat and did my work alongside the children receiving tutoring from my host families. When I returned from the field, I would often sit on the front step to greet locals passing by or play ludo (a game) with the aunties.

Locals remember researchers through the personal relationships forged over the "monographs" (Scheyvens & Leslie, 2000). I know this is true because Berhampur locals spoke so affectionately about a previous student who did just that, despite it being years since she was in the field. Browne and Moffett (2014) write that activities beyond research, such as respecting local customs and participating in social events, are not typically written about; yet these are critical to developing a connection with interviewees and the wider community. They also require a large amount of time and should be factored into the field research timeline (Browne & Moffett, 2014). My personal connection to fishers remains one of the most impactful parts of my time in Chilika.

4.5. Re-Integration Into Western Culture

Many students who undertake cultural exchange programs go through some degree of "reverse culture shock" (El-Asri et al., 2024). Top reasons include unhealthy comparisons between host and home cultures, reverse homesickness, and challenges reconnecting with family and friends (El-Asri et al., 2024). Re-integration difficulties into Western culture were briefly touched upon as part of my safety-abroad training. I underestimated re-integration. I recognize responses to these challenges vary by individual. I assumed I would return seamlessly to Western life. After returning, I struggled to acclimate due to a sudden change from a physically and mentally demanding environment. The extreme shifts in social and cultural norms required me to evaluate and analyze every decision, from personal hygiene, to health, and the

integrity of the research, even after I left. After living abroad for an extended period, it took time to readjust to Western culture.

4.6. Conducting Interdisciplinary Research

I achieved successful incorporation of both natural and social sciences methods in my dissertation (Serrao, 2026). This was evident in Serrao and Nayak (2026), where I applied ethnobiology to better understand the human–fish relationship in how vernacular names were assigned, and in Serrao (2026, Chapter 4), where I applied a mixed-methods approach (coding, saturation curves to signify adequate sample sizes, and heat maps to depict seasonal activities). It was challenging to write Chapter 4 of my thesis, where there wasn't any previous work to draw from. Feedback from my dissertation committee was necessary for study design, methodology, and data analysis. In addition, the peer reviewers for Serrao and Nayak (2026) and Serrao et al. (2026) helped to ensure that I engaged with relevant literature and theoretical concepts when publishing this work.

5. Final Reflections

Cross-cultural interdisciplinary research was challenging for me. I was away from my support systems for nearly one year and had to adapt to a different lifestyle. Additionally, language barriers made it difficult to communicate logistics with host families and initially understand day-to-day life (customs surrounding toileting, showering, menstruation). After experiencing and reflecting on my first foray into cross-cultural interdisciplinary research, I would approach future experiences differently. While there is no one "correct" approach to completing interdisciplinary cross-cultural research, here I present some considerations.

5.1. RA Involvement and Translation Process Detailed in Research Proposal

Translation execution could be more visible within the research process, and one way to achieve this is through detailing this in the proposal (Wong & Poon, 2010). It could be beneficial to give thought to the role of the RA in the research process, whether in-field translations are enough, or whether translations will take place post-field, while recognizing this process could change.

5.2. Interviewing the RA

Interviewing an RA to understand their life experiences, connections to groups researched, to understand local issues central to research questions, and held beliefs and values is important (Edwards, 1998). It was a missed opportunity in my research and may have provided me with insights on how my RA viewed the world, and the context in which he translated interviews.

5.3. Travel to Field Site in Advance of and After Research

If funds permit, prior travel to the field site before the research is encouraged because it could help with gaining confidence and refining sampling techniques (Browne & Moffett, 201). Returning to the field site post-fieldwork is also important to discuss and contextualize results.

5.4. Cultural Debrief

A pre-field briefing offered by the researcher's institution may be helpful to cover topics related to the geographic locality of the researcher. For women, it could be helpful to cover information surrounding showering, toileting, and menstrual disposal (Hamylton et al., 2023). Peer-to-peer learning from previous researchers with lived experiences would be invaluable, especially for transferring knowledge about customs and rituals that may be village- or region-specific.

5.5. Post-Field Debrief

A debrief when returning from the field could help researchers process their experiences and provide feedback, especially for non-technical issues that could help future students (Scheyvens & Leslie, 2000). These debriefs could be conducted by the supervisor, office of research, or research ethics office. Offering counselling when returning from the field could benefit researchers in processing field research.

5.6. Diary to Reflect on Both Personal and Interview Experiences

As a researcher with natural science training, I detailed the more technical aspects of conducting field research, and some minor reflections, but in hindsight, additional details could have been useful, including interview techniques, types of questioning, and informal details (challenges, participant relationships, coping with issues in the field; Punch, 2012).

6. Conclusion

I again highlight that the experiences I shared are my own, and this article is not to emphasize cultural differences as the issue; it is to be transparent and honest about challenges and to encourage researchers to be aware of the unexpected. Despite the difficulties I experienced in the field, my time in Chilika made a significant imprint on my life and was an opportunity I am forever grateful for. I am incredibly thankful to have lived in Chilika Lagoon; it not only provided me with the opportunity to carry out studies on the human dimensions of fisheries, but it opened my eyes to a different way of experiencing the world—in the food I ate, the transportation I used, the people I interacted with. The strong sense of community and togetherness was apparent, and it was this attribute that made me feel welcome. I was taken aback by the hospitality and warmth I received in every household I visited. Social connection is very important to me, and through interviewing and connecting with locals across various demographics, I enjoyed learning about their lives. I also gained a better understanding of what it means to undertake cross-cultural research in a foreign language, along with a different socio-ecological context.

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Conflict of Interests

The author declares no conflict of interests.

References

Andrews, E. J., Harper, S., Cashion, T., Palacios-Abrantes, J., Blythe, J., Daly, J., Eger, S., Hoover, C., Talloni-Alvarez, N., Teh, L., Bennett, N., Epstein, G., Knott, C., Newell, S. L., & Whitney, C. K. (2020). Supporting early career researchers: Insights from interdisciplinary marine scientists. *ICES Journal of Marine Science*, *77*(2), 476–485. https://doi.org/10.1093/icesjms/fsz247

Baker, N. G. (1981). Social work through an interpreter. *Social Work*, *26*(5), 391–397.

Barker, G. G. (2016). Cross-cultural perspectives on intercultural communication competence. *Journal of Intercultural Communication Research*, *45*(1), 13–30. https://doi.org/10.1080/17475759.2015.1104376

Behr, D. (2017). Assessing the use of back translation: The shortcomings of back translation as a quality testing method. *International Journal of Social Research Methodology*, *20*(6), 573–584. https://doi.org/10.1080/13645579.2016.1252188

Bergen, N. (2018). Narrative depictions of working with language interpreters in cross-language qualitative research. *International Journal of Qualitative Methods*, *17*(1). https://doi.org/10.1177/1609406918812301

Broesch, T., Crittenden, A. N., Beheim, B. A., Blackwell, A. D., Bunce, J. A., Colleran, H., Hagel, K., Kline, M., McElreath, R., Nelson, R. G., Pisor, A. C., Prall, S., Pretelli, I., Purzycki, B., Quinn, E. A., Ross, C., Scelza, B., Starkweather, K., Stieglitz, J., & Mulder, M. B. (2020). Navigating cross-cultural research: Methodological and ethical considerations. *Proceedings of the Royal Society B: Biological Sciences*, *287*(1935), Article 2020124.

Browne, B., & Moffett, L. (2014). Finding your feet in the field: Critical reflections of early career researchers on field research in transitional societies. *Journal of Human Rights Practice*, *6*(2), 223–237. https://doi.org/10.1093/jhuman/huu010

Cadman, R., Syliboy, A., Saunders, M., Denny, S., Denniston, M., Barry, E., Bishop, B., Landovskis, S., & Bailey, M. (2024). Using positionality and reflexivity to support equity in partnership-driven research. *Conservation Biology*, *38*(6), Article e14396. https://doi.org/10.1111/cobi.14396

Caligiuri, P., & Caprar, D. V. (2023). Becoming culturally agile: Effectively varying contextual responses through international experience and cross-cultural competencies. *The International Journal of Human Resource Management*, *34*(12), 2429–2450. https://doi.org/10.1080/09585192.2022.2083918

Dance, M., Duncan, R. J., Gevers, M., Honan, E. M., Runge, E., Schalamon, F. R., & Walch, D. M. R. (2024). Coming in from the cold: Addressing the challenges experienced by women conducting remote polar fieldwork. *PLOS Climate*, *3*(6), Article e0000393. https://doi.org/10.1371/journal.pclm.0000393

de Vos, A. (2020, July 1). The problem of 'colonial science.' *Scientific American*. https://www.scientificamerican.com/article/the-problem-of-colonial-science

Dugas, M., & Graham, J. E. (2011). Is consent for research genuinely informed? Using decision aid tools to obtain informed consent in the Global South. *Journal of Global Ethics*, *7*(3), 349–359. https://doi.org/10.1080/17449626.2011.591817

Durham, J. (2014). Ethical challenges in cross-cultural research: A student researcher's perspective. *Australian and New Zealand Journal of Public Health*, *38*(6), 509–512. https://doi.org/10.1111/1753-6405.12286

Edwards, R. (1998). A critical examination of the use of interpreters in the qualitative research process. *Journal of Ethnic and Migration Studies*, *24*(1), 197–208. https://doi.org/10.1080/1369183X.1998.9976626

El-Asri, S., El Karfa, A., & Farhane, H. (2024). Dealing with reverse culture shock after cultural exchange: Contributing factors and coping strategies. *Journal of Psychology and Behavior Studies*, *4*(1), 51–56. https://doi.org/10.32996/jpbs.2024.4.1.6

Feilzer, M. Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, *4*(1), 6–16. https://doi.org/10.1177/1558689809349691

Garg, S., & Anand, T. (2015). Menstruation related myths in India: Strategies for combating it. *Journal of Family Medicine and Primary Care*, *4*(2), 184–186. https://doi.org/10.4103/2249-4863.154627

Genda, P. A., Ngoteya, H. C., Caro, T., & Borgerhoff Mulder, M. (2022). Looking up and down: Strong collaboration is only the first step in tackling parachute science. *Conservation Science and Practice*, *4*(5), Article e12677. https://doi.org/10.1111/csp2.12677

Green, M. (2023). Privileged observers and colonial continuities: Institutional economies of expert knowledge in anthropology and international development. *American Ethnologist*, *51*(1), 118–125. https://doi.org/10.1111/amet.13249

Hamylton, S. M., Power, H. E., Gallop, S. L., & Vila-Concejo, A. (2023). The challenges of fieldwork: Improving the experience for women in coastal sciences. *Cambridge Prisms: Coastal Futures*, *1*, Article e38. https://doi.org/10.1017/cft.2023.26

Helmich, E., Cristancho, S., Diachun, L., & Lingard, L. (2017). 'How would you call this in English?': Being reflective about translations in international, cross-cultural qualitative research. *Perspectives on Medical Education*, *6*(2), 127–132. https://doi.org/10.1007/S40037-017-0329-1

Kelly, R., Mackay, M., Nash, K. L., Cvitanovic, C., Allison, E. H., Armitage, D., Bonn, A., Cooke, S. J., Frusher, S., Fulton, E. A., Halpern, B. S., Lopes, P. F. M., Milner-Gulland, E. J., Peck, M. A., Pecl, G. T., Stephenson, R. L., & Werner, F. (2019). Ten tips for developing interdisciplinary socio-ecological researchers. *Socio-Ecological Practice Research*, *1*(2), 149–161. https://doi.org/10.1007/s42532-019-00018-2

Khan, F. N., Collins, A. M., Nayak, P. K., & Armitage, D. (2018). Women's perspectives of small-scale fisheries and environmental change in Chilika Lagoon, India. *Maritime Studies*, *17*(2), 145–154. https://doi.org/10.1007/s40152-018-0100-1

Kim, E., Badrinathan, S., Choi, D. D., Karim, S., & Zhou, Y.-Y. (2022). Navigating "insider" and "outsider" status as researchers conducting field experiments. *PS: Political Science & Politics*, *55*(4), 754–758. https://doi.org/10.1017/S1049096522000208

Knott, E. (2019). Beyond the field: Ethics after fieldwork in politically dynamic contexts. *Perspectives on Politics*, *17*(1), 140–153. https://doi.org/10.1017/S1537592718002116

Kowal, M. (2024). Translation practices in cross-cultural social research and guidelines for the most popular approach: Back-translation. *Anthropological Review*, *87*(3), 19–32. https://doi.org/10.18778/1898-6773.87.3.02

Martin, V. Y. (2020). Four common problems in environmental social research undertaken by natural scientists. *BioScience*, *70*(1), 13–16. https://doi.org/10.1093/biosci/biz128

Martins, A. (2020). Reimagining equity: Redressing power imbalances between the Global North and the Global South. *Gender & Development*, *28*(1), 135–153. https://doi.org/10.1080/13552074.2020.1717172

Mullings, B. (1999). Insider or outsider, both or neither: Some dilemmas of interviewing in a cross-cultural setting. *Geoforum*, *30*(4), 337–350. https://doi.org/10.1016/S0016-7185(99)00025-1

Naaeke, A., Kurylo, A., Grabowski, M., Linton, D., & Radford, M. L. (2011). Insider and outsider perspective in ethnographic research. *Proceedings of the New York State Communication Association*, *2010*, Article 9. http://docs.rwu.edu/nyscaproceedings/vol2010/iss1/9

Nayak, L., Pati, M., & Sharma, S. (2016). A case study on aquatic biodiversity and its conservation from Chilika Lagoon, Orissa, East Coast of India. *Expert Opinion on Environmental Biology*, *4*(1). https://doi.org/10.4172/2325-9655.1000127

Nayak, P. K. (2014). The Chilika Lagoon social-ecological system: An historical analysis. *Ecology and Society*, *19*(1), Article 1. https://doi.org/10.5751/es-05978-190101

Nyboer, E. A., Reid, A. J., Jeanson, A. L., Kelly, R., Mackay, M., House, J., Arnold, S. M., Simonin, P. W., Sedanza, M. G. C., Rice, E. D., Quiros, T. E. A. L., Pierucci, A., Ortega-Cisneros, K., Nakamura, J. N., Melli, V., Mbabazi, S., Martins, M. S. L., Ledesma, A. B. B., Obregón, C., . . . Cooke, S. J. (2023). Goals, challenges, and next steps in transdisciplinary fisheries research: Perspectives and experiences from early-career researchers. *Reviews in Fish Biology and Fisheries*, *33*(2), 349–374. https://doi.org/10.1007/s11160-022-09719-6

Pasquini, M. W., & Olaniyan, O. (2004). The researcher and the field assistant: A cross-disciplinary, cross-cultural viewing of positionality. *Interdisciplinary Science Reviews*, *29*(1), 24–36. https://doi.org/10.1179/030801804225012446

Peterson, M., Monakhova, M., Maeroff, D., Arteaga, M., Anjolaoluwa, F. P., Frankson, P., Shaffer, L., Takata-Glushkoff, P. K., Begay, C., BurnSilver, S., Pfirman, S., & York, A. (2025). Preparing students and early-career researchers for ethical decision-making in community-engaged research in the Arctic. *The Polar Journal*, *15*(2), 348–371. https://doi.org/10.1080/2154896X.2025.2563477

Phongphanngam, S., & Lach, H. W. (2019). Cross-cultural instrument translation and adaptation: Challenges and strategies. *Pacific Rim International Journal of Nursing Research*, *23*(2), 170–179.

Punch, S. (2012). Hidden struggles of fieldwork: Exploring the role and use of field diaries. *Emotion, Space and Society*, *5*(2), 86–93. https://doi.org/10.1016/j.emospa.2010.09.005

Puri, S., & Kapoor, S. (2006). Taboos and myths associated with womens health among rural and urban adolescent girls in Punjab. *Indian Journal of Community Medicine*, *31*(4), 168–170.

Revez, J., & Borges, L. C. (2019). Pragmatic paradigm in information science research: A literature review. *Qualitative and Quantitative Methods in Libraries*, *7*(4), 583–593.

Rodríguez, L. R., & Minatti, W. (2024). On assistants and researchers: Power, positionality and vulnerability during fieldwork on the Colombian conflict. *Qualitative Research*, *26*(3), 603–622. https://doi.org/10.1177/14687941241277744

Sangasubana, N. (2014). How to conduct ethnographic research. *The Qualitative Report*, *16*(2), 567–573. https://doi.org/10.46743/2160-3715/2011.1071

Scheyvens, R., & Leslie, H. (2000). Gender, ethics and empowerment: Dilemmas of development fieldwork. *Women's Studies International Forum*, *23*(1), 119–130.

Serrao, N. R. (2026). *Applying fisher knowledge and scientific data to understand species importance in Chilika Lagoon, India* [Unpublished doctoral dissertation]. University of Waterloo.

Serrao, N. R., & Nayak, P. K. (2026). Variations in vernacular naming of important species across three fishing villages of Chilika Lagoon, India. *Journal of Ethnobiology and Ethnomedicine*, *22*(1), Article 34. https://doi.org/10.1186/s13002-026-00848-x

Serrao, N. R., Nayak, P. K., Rae, J. M., Armitage, D., Courtenay, S. C., & Wilson, C. C. (2026). Key gaps remain in the definition and application of keystone species concepts for fisheries management: A systematic scoping review. *People and Nature*, *8*(3), 582–597. https://doi.org/10.1002/pan3.70238

Shellock, R. J., Cvitanovic, C., Badullovich, N., Catto, D., DelBene, J. A., Duggan, J., Karcher, D. B., Ostwald, A., & Tuohy, P. (2023). Crossing disciplinary boundaries: Motivations, challenges, and enablers for early career marine researchers moving from natural to social sciences. *ICES Journal of Marine Science*, *80*(1), 40–55. https://doi.org/10.1093/icesjms/fsac218

Stefanoudis, P. V., Licuanan, W. Y., Morrison, T. H., Talma, S., Veitayaki, J., & Woodall, L. C. (2021). Turning the tide of parachute science. *Current Biology*, *31*(4), R184–R185. https://doi.org/10.1016/j.cub.2021.01.029

Steinert, J. I., Atika Nyarige, D., Jacobi, M., Kuhnt, J., & Kaplan, L. (2021). A systematic review on ethical challenges of 'field' research in low-income and middle-income countries: Respect, justice and beneficence for research staff? *BMJ Global Health*, *6*(7), Article e005380. https://doi.org/10.1136/bmjgh-2021-005380

Temple, B., & Young, A. (2004). Qualitative research and translation dilemmas. *Qualitative Research*, *4*(2), 161–178. https://doi.org/10.1177/1468794104044430

Turner, S. (2010). Research note: The silenced assistant. Reflections of invisible interpreters and research assistants. *Asia Pacific Viewpoint*, *51*(2), 206–219. https://doi.org/10.1111/j.1467-8373.2010.01425.x

Vulpe, T., Kealey, D., Protheroe, D., & Macdonald, D. (2001). *A profile of the interculturally effective person* (2nd ed.). Department of Foreign Affairs and International Trade.

Walker, C. (2024). Straight talk about periods and fieldwork. *Nature*, *630*, 777–779.

Wasser, J. D., & Bresler, L. (1996). Working in the interpretive zone: Conceptualizing collaboration in qualitative research teams. *Educational Researcher*, *25*(5), 5–15.

Wong, J. P.-H., & Poon, M. K.-L. (2010). Bringing translation out of the shadows: Translation as an issue of methodological significance in cross-cultural qualitative research. *Journal of Transcultural Nursing*, *21*(2), 151–158. https://doi.org/10.1177/1043659609357637

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