



# Navigating Tensions Between Indigeneity and Social Media Participation: A Case Study of the Guarani Community in South America

Edin Smailhodzic<sup>1</sup> D | Aline Fernandes<sup>2</sup> | Nonhlanhla Dube<sup>3</sup> | Monideepa Tarafdar<sup>4</sup>

<sup>1</sup>Faculty of Economics and Business, University of Groningen, Groningen, The Netherlands | <sup>2</sup>Department of Administration, Universidade Federal do Espirito Santo, Vitoria, Brazil | <sup>3</sup>Department of Management Science, Lancaster University Management School, Lancaster, UK | <sup>4</sup>Isenberg School of Management, University of Massachusetts Amherst, Amherst, Massachusetts, USA

Correspondence: Edin Smailhodzic (e.smailhodzic@rug.nl)

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#### **ABSTRACT**

This study investigates inherent tensions between social media participation and the ways of life in an Indigenous community and subsequent navigation approaches. Relying on an in-depth qualitative study and the notion of two-eyed seeing as a theoretical approach, the study focuses on the complex relationship between social media platform participation and the ways of life in a 'Guarani' Indigenous community in South America. This community successfully navigates tensions between participation on social media platforms and preserving their traditional ways of life. We contribute to two streams of literature. First, we contribute to the literature on digital platforms and indigeneity showing that social media use by Indigenous communities leads to specific tensions, as these communities try to balance the use of social media with their desire to preserve their ways of life and protect the natural environment and how they navigate these tensions. Second, we contribute to the literature in relation to digital platforms and non-economic value as we unpack social and environmental value in the context of the Indigenous community and show that non-economic value benefits multiple entities. Overall, we contribute to a deeper understanding of how Indigenous communities navigate tensions between participation on social media and their traditional way of life. Our study also offers practical insights into how policy makers and designers of social media platforms can better meet Indigenous communities' needs.

#### 1 | Introduction

There is an increasing recognition that social media<sup>1</sup> participation generates social value for individuals and communities in non-westernised contexts (Virtanen 2015; Chamakiotis, Petrakaki, and Panteli 2021) but that it also poses challenges. For Indigenous communities in particular, social media participation enables knowledge exchange (Bonina et al. 2021; Virtanen 2015), for example, medicinal traditional plants and sustainable land use practices (Urzedo, Westerlaken, and Gabrys 2023); engagement with the outside world (Lindgren and

Cocq 2017), for example, activism (Millaleo Hernández 2020; Wilson, Carlson, and Sciascia 2017); and distance learning (Huijser and Bronnimann 2014). However, social media participation also raises significant concerns such as loss of 'data sovereignty' (Bhawra et al. 2022; Kukutai and Taylor 2016), undermining of traditional values (Abubakre, Faik, and Mkansi 2021), and cultural erosion among youth (Lupien 2020). How Indigenous communities navigate unique tensions arising from their social media participation versus value realised and subsequent implications are underexplored in the existing literature.

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While various benefits of social media participation have been explored in settings like public and social development and healthcare (Chamakiotis, Petrakaki, and Panteli 2021; Goh, Gao, and Agarwal 2016; Scott, DeLone, and Golden 2016; Shoufan 2019; Tarafdar, Cooper, and Stich 2019), the literature has barely addressed the inherent tensions faced by different user groups. The aforementioned concerns within Indigenous communities, for example, naturally lead to tensions between realising the benefits when they choose to participate on social media and compromising their ability to protect their cultural identity and traditional values across generations. These unique tensions have not been addressed in the IS literature. Moreover, a large segment of the academic discourse on social media participation is based on studies in Western contexts, using theoretical frameworks that may not fully capture the experiences of Indigenous communities (Myers et al. 2020). A major implication of this is that little is understood about the inherent tensions faced by Indigenous communities and how they navigate them to realise value from social media participation.

This paper seeks to address this opportunity in the existing literature by examining how and why Indigenous communities engage with social media, the tensions arising therein, and how they navigate them. We adopt a qualitative research approach, focusing on an Indigenous community in South America. We use primary data collected during field visits to the Indigenous community and secondary data in the form of their social media content. We draw on the notion of 'two-eyed seeing' (Marshall and Bartlett 2010) to understand the community's unique social and cultural perspectives. Two-eyed seeing is a 'strengths-based approach' (Marshall and Bartlett 2010), which captures the worldviews of Indigenous communities and integrates their wisdom in understanding phenomena where indigeneity is central. It is an approach that empowers researchers to integrate and navigate between Indigenous and Western ways of knowing by 'weaving back and forth between Indigenous and Western ontologies, epistemologies, and methodologies' (Wright et al. 2019, 2). This concept emphasises the value of combining different knowledge systems to enrich understanding and foster holistic insights. Therefore, it enables researchers to avoid (unwittingly) reinforcing negative stereotypes about Indigenous communities, for example, as weak or vulnerable (Wright et al. 2019).

This research makes several contributions. First, we generate novel insights at the intersection of social media and indigeneity in relation to social media participation and related tensions. Specifically, our research uncovers three key tensions Indigenous communities must navigate as they try to balance participation with their desire to: (i) preserve their ways of life and (ii) protect the natural environment. Second, we unearth how Indigenous communities navigate these tensions by adopting strategies that allow them to protect/preserve what they value most. Third, we demonstrate the value of adopting more inclusive theoretical views (such as two-eyed seeing in this research) in examining non-mainstream contexts.

The remainder of this paper is organised as follows. We present our theoretical background, followed by our qualitative research approach. In Section 4, we present our key findings around the contextual background of the Guarani community, how they participate in social media, and the related benefits

and tensions. We then discuss key theoretical insights, contributions, limitations and future research opportunities in Section 5.

### 2 | Theoretical Background

There is a shortcoming in existing literature that concerns understanding how tensions arising from social media participation are resolved in realising the benefits, especially for Indigenous communities. In this line, our literature review critically examines existing studies, emphasising the benefits of social and environmental value, and underscores the need for further research to address these unresolved tensions, particularly for Indigenous communities. Following such focus, our literature review begins by exploring the historical and social context of indigeneity, as well as their social media participation. It then examines how social media generates value and the tensions it creates for these communities. Finally, it introduces the two-eyed seeing approach, integrating Indigenous and Western knowledge systems to understand how Indigenous communities navigate social media and its challenges.

### 2.1 | Indigeneity

The resilience and adaptive strategies of Indigenous communities, as highlighted by their historical context, are crucial for our research, providing a backdrop for understanding how they might similarly navigate and adapt to the challenges and opportunities presented by social media. Indigeneity is a collection of diverse cultural, spiritual and epistemological elements that vary across different geographical and cultural contexts. Universally, indigeneity is deeply intertwined with the self-determination of Indigenous peoples, their close relationship with their lands, and their unique cultural, spiritual and social systems (Smith 1999).

The historical experiences of colonisation and systemic oppression have profoundly shaped Indigenous peoples' interactions with their environment. For instance, Indigenous communities have strategically navigated and confronted public policy and economic development challenges to maintain their sovereignty and cultural integrity (Groenfeldt 2003; Hewitson 2013; Prasad, Vozikis, and Ariff 2006). They have also engaged in legal and political advocacy in response to government land policies that prioritise industrial development over preserving Indigenous territories, threatening traditional livelihoods and sacred sites. These advocacy goals include retaining control over their lands and governance while promoting traditional knowledge, languages, customs and social structures. Arguably, these experiences have brought to the fore the vulnerability and threats Indigenous communities face; at the same time, they demonstrate the resilience of Indigenous communities (Brookshire and Kaza 2013; Gladstone and Pepion 2017). Although research has extensively focused on the vulnerability of Indigenous communities, their resilience—reflected in resistance to exploitation and a strong sense of self-determination—has received less research attention.

Despite shared histories and characteristics, Indigenous communities are heterogeneous. Researchers are cautioned against

generalising Indigenous experiences and calling, instead, for appreciation of the wide array of cultural practices and worldviews that have endured despite longstanding discrimination and marginalisation (Salmon, Chavez, and Murphy 2023; Jackson 2013; Van de Ven 2011). Understanding this diversity is essential for our study as it underscores the need to consider the unique cultural contexts when examining how Indigenous communities use and experience social media.

Overall, the literature emphasises the need to integrate Indigenous perspectives into research (Salmon, Chavez, and Murphy 2023). This necessity is particularly evident when studying digital technologies and Indigenous communities (Chughtai and Young 2022). Therefore, this study centres on Indigenous perspectives to understand the social and environmental values derived from social media participation and related tensions.

The relationship between Indigenous peoples and digital technologies, such as social media, is intricate and multifaceted. These interactions go beyond mere technology adoption, embodying a complex interplay between tradition and modernity (Young 2018). The impact of digital technologies on Indigenous peoples varies significantly, with their experiences often diverging from those of non-Indigenous individuals (Diaz Andrade et al. 2021). This divergence is influenced by Indigenous communities' unique cultural practices, beliefs and values, which shape their relationship with technology. For instance, the Klamath Tribes of Oregon used ICT for cultural identity restoration through emancipatory pedagogy, promoting awareness of their history and societal challenges while enabling community engagement (Young 2018). Such culturally grounded uses of technology highlight how Indigenous perspectives lead to different and often more holistic technological experiences. Understanding these distinct experiences is crucial for our study as it highlights the need to consider cultural contexts when examining how Indigenous communities interact with social media for social and environmental value and navigate related tensions.

Emerging research indicates that Indigenous communities use social media to engage in social, economic, and political activities (Lupien 2020). They actively create IT artefacts, such as online videos and computer simulations, to present their selfimage publicly on platforms like YouTube and Facebook (Rajão and Marcolino 2016). However, social media participation can be a double-edged sword for Indigenous communities, offering both opportunities and threats. On the one hand, social media allows them to connect with other communities, engage in activism, and access distant learning opportunities (Huijser and Bronnimann 2014; Millaleo Hernández 2020; Wilson, Carlson, and Sciascia 2017). On the other hand, it can expose young people to outside influences and threaten Indigenous culture by potentially compromising traditional ways of life and values (Lupien 2020; Abubakre, Faik, and Mkansi 2021). This dual nature of social media underscores the importance of exploring how Indigenous communities navigate these dynamics in relation to their participation on social media, which is motivated by creating and appropriating social and environmental value from social media.

#### 2.2 | Social Media and Value

This section critically examines existing literature, focusing on social and environmental value, and highlights the need for further research to address these unresolved tensions, especially for Indigenous communities. A growing area of research has recently emerged, exploring the value that social media generates, particularly beyond its economic benefits (Bonina et al. 2021; Kallinikos and Tempini 2014). Social value is important for Indigenous communities as it enables them to advocate for their specific aims (Millaleo Hernández 2020), and share their culture (Urzedo, Westerlaken, and Gabrys 2023). In this respect, we define social value as a non-economic type of value exceeding individual interests and impacting a wider community (Chamakiotis, Petrakaki, and Panteli 2021). Furthermore, environmental value, though less discussed in the context of social media, is of crucial importance to Indigenous communities, who prioritise environmental preservation (Miller, Tait, and Saunders 2015). In this study, environmental value is considered as the benefits related to environmental conservation that arise from social media engagement.

Considering our study's focus on the significant yet underexplored social and environmental values and related tensions in the context of the Indigenous community, it is critical to further explore how these dimensions manifest in broader social value within social media. Mashayekhi and Head (2022) emphasise the role of perceived connectedness in creating social value through social capital, thus emphasising the importance of belonging to a community. Their study highlights the dual role of benefits derived from social media use, suggesting that both active and passive consumption are important in maintaining user interest. However, this duality may also introduce potential tensions, such as the effort and risk associated with social media use sometimes outweighing the perceived benefits, leading to user dissatisfaction and disengagement. The literature, however, lacks a deeper exploration of how users navigate these tensions, especially in specific contexts such as the one involving Indigenous communities.

Lu, Singh, and Sun (2017) explore how core-periphery network structures facilitate knowledge sharing and value creation on social media. While core members benefit from their central positions, there are inherent tensions, such as the exclusion of peripheral members and the risk of knowledge hoarding. This dynamic underscores the need for balanced network structures that promote inclusive participation and equitable value distribution, which is important for Indigenous communities as it may enable them to engage in broader societal networks, amplify their voices and safeguard their interests and rights within social media more effectively.

Social media's role during crises, such as natural disasters, highlights its potential for creating significant social value through real-time information dissemination and community support. Mirbabaie et al. (2020) demonstrate how social media serve as critical channels for communication and collective problem-solving during emergencies. However, they also highlight the spread of misinformation as a major challenge,

emphasising the need for effective moderation and verification mechanisms. Despite these insights, we still need to understand how similar dynamics are navigated by Indigenous communities, who may face unique vulnerabilities and have distinct needs.

Some studies have focused on social value in the context of healthcare. As such, Tempini (2017) emphasises the central role of an integrated, community-driven approach to creating social value through social media. Social media users create value through activities such as engaging with each other, sharing knowledge (Kallinikos and Tempini 2014), and providing emotional and informational support (Goh, Gao, and Agarwal 2016). Saifee et al. (2020) investigate whether online reviews of physicians correlate with actual clinical outcomes. They find a complex relationship, suggesting that while reviews provide useful insights, they may not always accurately reflect service quality. This discrepancy highlights the challenge between perceived and actual value, calling into question the reliability of usergenerated content as a measure of professional competence. This may be particularly relevant in the context of Indigenous communities, where social media could serve as a tool for bridging gaps in healthcare access and quality, though it also raises concerns about maintaining cultural appropriateness and ensuring that the collective voice of the community is accurately represented and respected.

Social media's analytical capabilities are instrumental in creating value for both users and organisations. Brandt, Bendler, and Neumann (2017) examine how social media analytics contribute to value creation in urban smart tourism ecosystems. By analysing user interactions and content, valuable insights can be generated to enhance user experiences and inform organisational strategies. Whereas Brandt, Bendler, and Neumann (2017) explore aspects of social and environmental value in the Western context, social media participation can also be influenced by cultural values, as Stump and Gong (2017) point out in their study. They illustrate these differences between individualistic and collectivistic cultures. In the same vein, Hu et al. (2023) explore how espoused tight culture, characterised by strict social norms, influences user interactions and value perceptions. In the context of our study, tensions could emerge when there is a misalignment between cultural expectations and the design or use of social media. In particular, for Indigenous communities, misalignments between cultural expectations and social media may introduce tensions, emphasising the importance of understanding cultural norms and values in their use of social media and ways to navigate related tensions. Hence, further exploration is necessary to determine effective strategies for managing these sorts of tensions within the social media sphere as the literature does not adequately explore such issues within the context of Indigenous communities, who may have specific concerns about data sovereignty and cultural sensitivity (Bhawra et al. 2022).

In conclusion, the reviewed literature highlights the multifaceted nature of social value and environmental value in social media. While social value is derived from various sources, such as knowledge sharing, user co-creation, cultural influences and data-driven insights, significant tensions might arise in the process. Few studies explicitly identify the specific tensions users

face when engaging with social media for the creation and appropriation of social and environmental value, particularly for Indigenous communities.

#### 2.3 | Tensions and Social Media

The literature on social media participation acknowledges underlying tensions that can affect the realisation of participation benefits. These tensions emerge when users encounter conflicting demands that lead to discomfort, stress and anxiety (Smith and Lewis 2011; Putnam, Fairhurst, and Banghart 2016). Our study specifically focuses on how Indigenous communities navigate and overcome tensions arising from the balance between preserving traditional values, which stem from their isolated living conditions, and the connectivity afforded by social media.

In broader contexts, the literature discusses various tensions related to social media use. Laurell and Sandström (2017) explore the tensions between market and non-market logics within social media platforms. In emergency management, Karanasios et al. (2023) examine tensions resulting from the differing institutional logics of organisations using social media. Similarly, Bonina et al. (2021) discuss the challenges and complexities of development platforms, emphasising the need for a deeper understanding of the tensions these platforms can generate. Sæbø, Federici, and Braccini (2020) call for further research on how social media opportunities can create tensions and the strategies for managing them.

As mentioned in the previous section, geographical and cultural contexts significantly shape social media use and the value realised (Hu et al. 2023). Studies focusing on contextual differences provide critical insights into regional variations and the unique ways social media is used. This is particularly pertinent for Indigenous communities. While social media may provide a space for activism and connection (Millaleo Hernández 2020), it can also expose these communities to external influences that may undermine their cultural integrity and traditional ways of living (Rice et al. 2016). Our research aims to fill this shortcoming in the literature by examining the specific tensions Indigenous communities face and how they manage to reconcile these with their social and environmental value realised through social media participation.

# 2.4 | Two-Eyed Seeing Approach

The literature often highlights the inadequacy of Western approaches in fully capturing Indigenous experiences while acknowledging that Indigenous theories are scant (Salmon, Chavez, and Murphy 2023). Yet, there is an ongoing tendency to study Indigenous contexts through Western theoretical lenses. This critique also extends to digital technologies (Chughtai and Young 2022), where, for instance, Western-centric research paradigms have historically marginalised Indigenous voices and knowledge systems (Smith 1999). Empirical research on indigeneity frequently adopts theories informed by Western ways of organising economies. This necessitates a shift towards more inclusive and representative theoretical foundations that honour Indigenous ways of being and knowledge systems (Banerjee

and Linstead 2004; Henry, Dana, and Murphy 2018; Lin, Kuo, and Myers 2015; Spiller et al. 2011). To achieve meaningful insights from Indigenous contexts, there is a need to capture their worldview and avoid the trap of imposing assumptions that are invalid for their ways of life, interests and core concerns. We draw on the two-eyed seeing approach that advocates for integrating Indigenous and Western knowledge systems in empirical research (Bartlett, Marshall, and Marshall 2012; Marshall and Bartlett 2004). It encourages valuing the strengths of both Indigenous and Western worldviews and suggests that a more comprehensive understanding can be achieved when both perspectives are considered together (Bartlett, Marshall, and Marshall 2012; Wright et al. 2019). This approach involves weaving back and forth between the best of two worlds, recognising that while both perspectives hold equal importance, one may provide deeper insights into a specific concept or situation than the other.

This framework is particularly relevant to studying Indigenous peoples' engagement with social media because it emphasises the need to examine phenomena through diverse perspectives, beliefs, and values (McKeon 2012). This aligns well with the coexistence of traditional Indigenous perspectives and contemporary practices via social media participation. The two-eyed seeing approach helps avoid conflicts between different perspectives by respecting differences, creating bridges, and leveraging the strengths of both approaches (Hatcher et al. 2009; Hatcher and Bartlett 2010). This is crucial for our research as it enables us to understand how Indigenous communities balance the benefits of social media engagement with preserving their cultural heritage.

In the context of social media use by Indigenous groups, the twoeyed seeing approach facilitates deeper insights into the unique ways Indigenous communities interact with social media. This is crucial because Indigenous communities and Westerners often have different views and conceptualizations about information systems (Myers et al. 2020). Thus, the two-eyed seeing approach allows us to address emerging calls for IS research to investigate Indigenous participation on social media through theoretically contextualised approaches. By doing so, we bring marginalised views to the forefront (Chughtai and Young 2022) and develop more nuanced narratives about Indigenous communities (Chughtai et al. 2020). This approach is essential for our study as it ensures that we capture the full spectrum of social and environmental values that Indigenous communities derive from social media, providing a more inclusive and accurate portrayal of their social media experiences and related tensions.

### 3 | Research Design

We investigate social media participation in Indigenous communities and seek to understand the tensions arising and how the community navigates them. To achieve an in-depth understanding of the social context in which the phenomenon occurs (Walsham 1995), we adopt a case study approach (Myers and Walsham 1998). Given the elusive nature of Indigenous communities and their engagement with social media, ethnography is useful for understanding the study context better (Myers 1999) because it enables observation of, and participation in, the daily

lives of individuals and communities, resulting in a more holistic understanding of the subject matter. However, due to resource constraints, our study incorporates ethnographic elements in lieu of a full-scale ethnographic study to achieve immersion, involvement, and engagement within the research context (Dumont 2022).

#### 3.1 | Research Setting

The unit of analysis is an Indigenous community active on social media. Our research setting is in South America, and the Indigenous community under study lives on over 8500 ha of land, a government-protected forest reserve, that its ancestors inhabited for centuries. We have chosen not to disclose the name of the country where the study was conducted, respecting a commitment made to the community. A lot has changed around them over time. Notably, the reserve now sits close to a modern-day major city.

Inside the reserve, there are around 700 people who are divided into five family groups. These family groups have the right to benefit from the land and the responsibility to take care of it. Each family group has a leader, usually the oldest person in that group—in line with tradition. There is a community leader, a chief, who represents the interests of the Indigenous community. The chief is responsible for making contacts and negotiations with government authorities and other external actors. They must participate in meetings, make decisions, write and sign documents, negotiate projects, collect donations and distribute them, organise the main traditional celebrations, take care of the facilities and assets of the community, organise work groups in the community gardens and resolve conflicts within the community.

The Guarani are very spiritual and consider themselves inseparable from nature. This connection to nature is also reflected in their names, as every individual has a Guarani name related to elements in nature. They also care about the knowledge and practices that have been passed down from their ancestors across generations and believe that their ancestors continue to guide them. All these attributes reflect indigeneity, as highlighted by Wright et al. (2019). However, although they have maintained most of their customs for thousands of years, they have also been changing. A prime example is that the community is highly active on social media. Given the differing world-view of Indigenous people from the outside world (we use outside world instead of Western to reflect the non-Western context in which they are embedded), including how they 'come to understand the world around them' and their 'relationship to reality' (Wright et al. 2019, 2), this is a highly relevant context for unravelling the relationship between indigeneity and social media participation.

#### 3.2 | Data Collection

To develop a comprehensive understanding of the case, we used multiple data sources (Benbasat, Goldstein, and Mead 1987). The second author visited the Indigenous community for data collection twice. The first visit was in February 2023 for 12 days

as a participant observer (this was always by day because the chief did not allow overnight guests). The second visit was in January 2024 for 2 days as part of a cultural experience following a personal invitation from the chief. The second author (like everyone else involved in the event—that is, tourists, visitors and invited guests) participated in multiple activities, such as watching traditional singing and dancing, tasting traditional food, body painting, archery, trekking, waterfall bathing and attending a religious ritual. We also made use of secondary data, which includes (i) grey literature/content, (ii) reports from official public bodies and Indigenous associations, (iii) social media profiles of the community members (especially Instagram and Facebook) and (iv) social media profiles of partner organisations that promote them. For example, this included reports and information available on websites and social media pages of official public bodies (e.g., Secretary of Culture, Ministry of Tourism and Ministry of Environment), Indigenous associations, and NGOs involved with nature protection.

The main sources of data were primary interviews, focus group discussions (FGDs), and observations made during the second author's visits to the community.

The point of entry into the community was a contact that the second author found on social media. The contact considered themselves a 'bridge between the community and the outside world' and was a descendant of a Guarani who had spent part of his life in the reserve. In turn, the contact introduced the second author to the chief, the 'gatekeeper' of the community. After several exchanges on WhatsApp, the chief granted the second author access to the reserve.

In addition to the secondary data gleaned from social media places, the contact and chief helped us to develop an initial understanding of the community and prepare for the field work. They informed our data collection tools and enabled us to better immerse ourselves in the context. For example, the attachment of the community to nature was evident in social media and confirmed by this contact. Thus, we wanted to explore this further as part of our data collection. A data collection plan was developed, covering interviews, FGDs and observations for the planned data collection phase.

Before the field work, the second author sought advice from the contact about respectful ways of engaging with the community and any unwritten expectations. This contact was also maintained throughout the first visit, enabling further contextualisation of observations and data as well as real-time adjustment of plans and behaviour. During the field work, the second author relied on the chief for daily scheduling and introduction to key informants. We were also flexible with talking to respondents. For example, some interviewees preferred to be interviewed in nature (e.g., during trekking in the forest, under trees, by river and waterfalls) and women generally preferred not to be recorded. Such flexibility, seeking guidance before embarking on the research (from the contact), supporting people with Indigenous knowledge (the contact and the chief), deferring to Indigenous leadership (the chief) during the field visit, and forging relationships with participants (as evidenced by the invitation to the reserve and on-going interactions with some members of the community nearly a year after the first visit) were all

crucial for the successful adoption of the two-eyed seeing approach (Wright et al. 2019). The second author also maintained daily contact with the other co-authors during the field work, adjusting plans and protocols as the community led the process and new insights into the daily lives of the community emerged.

In the research planning process, we developed an initial protocol with sample questions to guide us in conducting the interviews and focus group discussions. They were adjusted as we gained a better understanding of the community's reality and as the interviews and focus group discussions evolved. For instance, one of the questions in the original interview protocol was about a person's typical day. Once it was revealed that there is no such thing for the community, we changed the question and focused on how they usually make decisions about how to use their time. Overall, the questions were constructed to accomplish four different goals: develop a good understanding of (i) community demographics and their way of living with questions such as: What is your role within your household? And within the community? Could you please describe your typical day? (ii) their customs and shared values, such as: What does being a member of this community mean to you? How would you describe the 'way of life' of your community (customs and values)? What are the main values, beliefs, and norms? (iii) what, how, and why social media is used within the community with questions such as: Do you use social media? If so, which platforms, how often, and for what reasons/purposes? How do you feel about social media use in your family? What about in the community? and (iv) capturing social and environmental value from social media use with questions such as: How is social media used to raise awareness of social, environmental, or other issues? How is social media used for communication? How do you use social media with people from the aldeia at home and away (internal communication) or with other people (external communication) or both?

The total number of interviews was 41 (minimum duration, 10 min; maximum 50), with 27 being recorded and 14 unrecorded at the request of the respondents. For the latter, the second author took written notes during the interviews and recorded voice note summaries after the interviews. Interviews were conducted in the official language of the South American country to which the Indigenous community belongs. The second author transcribed and translated it into English. For anonymity, all respondents were assigned fictitious names in line with their relation to nature (e.g., Waterfall, Ocean, Butterfly). Other authors checked for trustworthiness by comparing with observation notes and asking follow-up questions on the contents to enhance rigour (Poland 1995). Participants were selected in order to include various community stakeholders who used social media, from community leaders and individuals working on education and health initiatives to households and individuals with various roles within the community ranging from spiritual leaders and forest guardians to parents and the youth. Thereafter, respondents were identified through snowballing; we asked interviewees to suggest other people with a view to diversifying the respondent sample.

Two FGDs were conducted, enabling deeper insight into the phenomenon being studied (Belanger 2012; Nili, Tate, and Johnstone 2017) and more representation through a diverse

participant group. The first FGD had 19 participants, while the second had 12. Participants' ages ranged from 17 to 50, and like the interviewees, they varied in gender and roles within the community. The focus groups were conducted mid-way through the interviews and provided further insights into perceptions, participation on social media, non-economic value, the tensions faced and how they are navigated.

Observations were made throughout the time spent with the community. In some instances, it was observations of social media participation in daily life (people browsing their mobile phones while waiting to be seen by the physician at the health centre) and others were through participation in various activities (e.g., visiting sacred sites and shadowing community leader—1 day was spent weeding with the chief and learning about the healing properties of different plants). The observations helped us to better understand the context and enabled us to triangulate information gathered through other means (e.g., interviews). The second author recorded summary and observation notes daily. These yielded 58 pages of text when they were transcribed. They were discussed with the rest of the author team while in the field (about once every 3 days) and at the end of the visit. The data collection process is summarised in Table 1.

### 3.3 | Qualitative Data Coding and Analysis

Before the fieldwork, we analysed publicly available secondary data about the Indigenous community (individuals or representatives of the community) under study on social media to develop protocols for interviews and FGDs. A dominant theme that we observed was the connection to nature and the sense of community—Wright et al. (2019) allude to these as defining features of Indigenous communities. We, thus, included questions about relationships within the community and with nature.

We began the analysis process by developing an overview of the research context to understand how the community lived and interacted with social media. We then proceeded to analyse the data by identifying specific instances of social media use. In line with our literature review presented in Section 2, we categorised value according to the two dimensions of social and environmental value. During this process, it became clear that value could be described in terms of what it entails (we labelled these as value outcomes). In this respect, we were informed by extant literature on value appropriation and creation. Accordingly, value appropriation is about the absorption of social/environmental benefits embedded on social media. Value creation represents the generation and embedding of social/environmental benefits on social media.

We then visually mapped the patterns of social media participation against value dimensions and outcomes to identify and depict the underlying tensions informing use patterns. Both open and axial coding procedures were followed (Strauss and Corbin 1990).

Throughout the process, we relied on the extant literature to generate codes while also being open to emergent findings from the data (Dubois and Gadde 2002). Through two-eyed seeing, we sought to 'abolish negative stereotypes of Indigenous people as being weak or vulnerable and emphasizing the strengths and resiliency of communities' (Wright et al. 2019, 10) and looked for empirical puzzles that were counterintuitive or surprising. For instance, once we overcame the tendency to interpret observed behaviour and statements through a Western perspective, we were surprised by the approaches taken within the community to navigate tensions. The process involved three key stages of data analysis. The second author led each analysis stage, working closely with the other authors to assess the reliability and significance of findings and to ensure the internal consistency and validity of the second-order categories leading to aggregate dimensions (third-order themes), as proposed by Gioia, Corley, and Hamilton (2013). The comparison of findings to the literature ended once we were satisfied that stable patterns had been observed as a result of sufficiently scanning and interrogating the data. Appendix 1 presents an overview of concepts and related first-order codes and second-order concepts.

We simplified the overall analysis by dropping codes that were found to have no theoretical traction (Grodal 2018). For example, although we found that the community was concerned about social media addiction and its potential toll on mental health, these concerns would exist in any other community and have been extensively researched. So, we switched

**TABLE 1** | Data collection.

Data collection method	Number	Participants	Additional information
Interviews	41	Community members using social media	27 recorded and 14 unrecorded Duration: 10 to 50 min
Focus groups	Two	Group 1: 19 participants (younger community members aged 17–27; 8 female, 11 men) Group 2: 12 participants (older community members aged 25+; 5 female, 7 male)	Duration: 90 min Duration: 120 min
Observations	12 days	We visited sacred sites, observed school and health initiatives, and shadowed community leaders.	Daily observation notes are recorded and transcribed (58 pages); Discussed with the author team on an ongoing basis

focus to unique and compelling aspects of the community. One of the key outcomes of this process was that the authors unearthed the key tensions between indigeneity and social media participation. We followed this line of inquiry through the two-eyed seeing approach to establish the community's navigation approaches.

It also emerged from the analysis that tensions had an impact on the direction of information flows within social media and who had access to what information. We set out to understand how these were linked to navigation approaches and the ultimate realisation of value outcomes. Appendix 2 presents an overview of these concepts (i.e., tensions and information flows) and the data coding structure.

### 4 | Findings

Our findings show that although social media participation brings several social and environmental benefits to Indigenous people, it also leads to multiple tensions. Balancing these positive and negative aspects is a challenge. This section unpacks these aspects and presents strategies that the Indigenous community studied undertakes to derive non-economic value from social media participation and, at the same time, to be true to their way of living. It starts by contextualising the findings through describing what the Guarani community considers fundamental to their existence and the key challenges they face in relation to this. Then, it presents different types of benefits of social media participation, the related tensions that arise, and the strategies that the community undertakes to navigate the tensions in order to realise specific value outcomes.

#### 4.1 | Background: The Guarani Community

In addition to the aforementioned connection to ancestral knowledge and nature (Section 3.1), the Guarani see themselves as having a duty to protect nature for the benefit of future generations. As two respondents put it:

'For me, being Guarani is sacred, it's being connected with nature and with an ancestral strength and wisdom that have been nurturing us during centuries'. (Thunder, Male)

'I am very grateful for being a Guarani. This is because our culture is so beautiful, and I believe it can especially be related to protection. We protect our land, we protect the forest, we protect the animals, we protect ourselves and our families... we want to protect today so that our kids can have a tomorrow'. (Flower, Female)

These convictions are reflected in how they live. For example, the main daily life activities include planting, fishing and collection of natural items in the forest for subsistence; praying, meditation, and holding ceremonies, such as for healing; leisurely activities like trekking and waterfall/river bathing; and nature protection

which includes surveillance activities, forest guardianship and deforestation control. Most of the community members have lived all their lives in the reserve. Some members occasionally leave to run errands in nearby cities. Some went away for some years to pursue higher education but came back. Aside from community members who work in formal institutions inside the reserve (alongside non-Indigenous peers who commute to and from the reserve for work)—a health unit and a school—we did not identify community members who have formal jobs outside the reserve. The community follows different patterns of daily living from the outside world. A respondent revealed awareness that they live differently from the outside world and argued that this reflects their relationship with nature and their freedom.

'Being Guarani is being free and in peace with each other and with nature. Different from the non-Indigenous world, we are not driven by hours, days, and schedules... here, we have more freedom'. (Sky, Female)

Although the community strongly emphasises the importance of keeping these ways of life, two key observations emerge from the data. First, they are not entirely resistant to change—there are just certain aspects of that they are protective of. As one respondent put it, if 'the white man' and the 'black man' have changed over the last 5000 years, 'why wouldn't the Guarani?' (Mountain, Female). Another respondent pointed out:

'Some people find it weird that we have access to modern technologies because we are Indigenous people. The fact that I use a mobile phone, for example, does not make me any less Guarani... I value my traditions and beliefs with all my heart. I love singing our traditional songs, meditating in the praying house, and listening to the elderly about Guarani heroes and legends'. (Ocean, Male)

Second, there is recognition that aspects of life and nature that the community considers to be fundamental are under threat. Primarily, they understand that their lives and habitat are impacted by a capitalist world. There were several examples to demonstrate this from an environmental viewpoint. One respondent mentioned that 'the forest is dying' (Tree, Male, FGD 2). This is evident in the current need to subsidise what nature provides with supplies from the outside world—most families buy food from supermarkets in neighbouring towns. The community leader also stated that 'today, people are fighting for precious minerals; tomorrow, the world will be fighting for fresh water'. Socially, the community also faces prejudice from the outside world.

'There are all sorts of prejudices around us... Some people think we are lazy, others [call us] savages, meaning we don't know how to behave or do things properly (...)'. (Ocean, Male)

The Guarani are keen to protect and sustain their way of life and nature and social media participation offers some possibilities, some of which are already highlighted in the extant literature (see Section 2). However, when engaging on social media for the purpose of social and environmental value, tensions also arise that can augment the existing threat or create new problems. It is against this backdrop that we explore the implications of social media participation for the community under study.

# **4.2** | Social Media Participation: Perspectives, Platforms, and Activities

Although the community has shared values regarding the fundamentals of its existence, there are differences in how they see the outside world and, therefore, connect with it. While all individuals can access social media—in addition to personal mobile devices, any individual can access computers and high-speed Internet at the Indigenous school—some individuals prefer to abstain from social media participation. Among users, there are still variations in social media participation, which directly lead to differences in the degree of connectedness to the outside world. Some individuals see it as positive overall:

'The use of social media, in my opinion, is extremely positive. Of course, you need to know how to use it. It makes it possible for us to access the outside world, we are not bounded anymore. It helps us access information, knowledge, (...) and resources that we would not access easily being here'. (Waterfall, Female: FGD 2)

The differences in perspective are also evident even at the level of family groups within the reserve.

'My family group is the closest to the "outside world"—we are very connected. (...) We use social media extensively to promote our cultural activities. Our pages are the first "invitation" that people get to come here. (...) Could we do it otherwise? Yes, I think we could but perhaps, we would not reach the amount of people we can by using the social media'. (Flower, Female)

The older generation mostly argues that oral tradition remains valuable for passing down knowledge from the elderly to the young over time. Others raised concerns about, for example, teenage addiction (Sky, Female) and gradual detachment from the Guarani way of life (Rain; Female, FGD 2). Nonetheless, social media participation is not seen as inherently problematic overall, and some respondents called for reflection on the part of users. A spiritual leader explained:

'If I were to advise someone on using social media in the context of Guarani life, I would invite the person to ask themselves three key questions: (i) for what am I using this technology? (ii) why am I using this technology? and (iii) which good is coming from using this technology for me and for my community?' (Wind, Male)

Despite the different perspectives on social medial participation, users are diverse—from young people of school-going age to community leader and elderly. The most used social media are WhatsApp, Instagram, YouTube, Facebook and TikTok. Users on social media participate for a range of reasons. The most basic forms of participation are no different from those of the outside world. Individuals use the platforms to communicate with friends and loved ones living within or outside the reserve, share and access information, and for entertainment purposes. In the following sections, we unpack the benefits and key tensions linked to the Guarani way of seeing and living life and their participation on social media.

## 4.3 | Benefits of Social Media Participation

Benefits of social media participation can be social in nature, benefiting the community under study (and the Guarani people more broadly), or environmental, enabling (enhanced) preservation of nature. The environmental benefits also directly extend to the community, given their relationship with, and reliance on, nature. We also find benefits that accrue to the outside world, and we unpack this throughout this section.

The benefits of social media participation relate to exploiting existing opportunities offered by social media (value appropriation) and creating content for the benefit of the community and the outside world (value creation). However, they also lead to tensions described in Section 5.

### **4.3.1** | Value Appropriation

Value appropriation consists of dimensions linked to social and environmental value. Some benefits are no different compared to those that accrue to the outside world (i.e., they are the same as for any other user groups in the outside world). Coordination of daily activities within the reserve, socialising and learning about other people and cultures are examples, especially for younger users. Value appropriation related to the protection of the Guarani way of life was found to have two beneficiary groups. First, there is value that accrues primarily to the community. These include staying in touch with far away friends and/ or family as well as planning and coordinating cultural events. Shielding from the outside world while being connected through using social media is another crucial benefit. A respondent mentioned that they seek support online and pay bills rather than go outside the reserve. Although this is an economic activity, the benefit is social, being valued by individuals who do not like going outside the reserve because 'when we go, some people stare at us' (Storm, Female; during FGD2). A similar observation applies to finding love, whereby users from the community use social media to find partners from other Guarani communities in various parts of the country.

'Guaranis only marry Guaranis, that is how the culture stays strong. When people start looking for partners, sometimes there are not many options in this community. Therefore, they go on social media to meet Guaranis from other reserves and, hopefully, get partners...' (Moon, Female)

The community also uses social media to access relevant news (typically on the environment) and solicit help from the outside world. For example, some members successfully put out calls for assistance from the government, influential people, NGOs, and society in general with food, winter clothing, travel assistance to attend events related to Indigenous rights, and PPE (especially during the COVID-19 pandemic). Children of school-going age are encouraged to use social media to learn more about their own heritage from materials posted online.

'Here at school, students have access to free wi-fi, computers, printers, and to multiple platforms, such as YouTube, Facebook, Instagram... Because these platforms are part of their lives now, we usually use them to help us with the traditional school subjects. We encourage the students to use them to access contents that go beyond socialisation and communication. We try to use these platforms as complements to books, notebooks, and the teachers' knowledge. For example, as an Arts teacher, I encourage them to look for videos on YouTube about Guarani body paintings and visual communication'. (Sun, Male)

Second, there is value that accrues to both the community and outsiders. Specifically, the community engages with outsiders, like researchers and individuals on a pilgrimage of sorts, via social media to arrange visits to the reserve.

#### 4.3.2 | Value Creation

Value creation consists of dimensions that are best described as a unique offering from the community; we found dimensions linked to social and environmental value. Value creation appears to be dual in terms of benefits, that is, a single action benefits the community and outsiders simultaneously, but in different ways. Two instances were found. First, the community generates social value by using social media to show that the 'Guarani way of living is alive' (Thunder, Male; FGD 2), the community signals pride and contentment in how it chooses to live and invites others to learn more about it. This way they build awareness on the part of outsiders and help to fight stigma and prejudice against them. Thus, the public becomes enlightened, and they can maintain their way of life with less pressure to adapt.

'There are all sorts of prejudices around us... Some people think we are lazy, others [call us] savages, meaning we don't know how to behave or do things properly. By sharing our life in the reserve, we try to show them a little bit about us, about who we are, what we value, how we live and why we do certain things differently. Being different is not bad, is it?' (Ocean, Male).

Second, we found that the community creates environmental value by documenting essential information on nature and sustainable practices. In some respects, this is intended to raise awareness and educate the public. More importantly, it is a form of environmental activism whereby social media is used to highlight the plight of the planet and get others involved in preservation efforts.

'Through social media, (...) we can show the importance of preserving nature, all these things that the world cannot see, cannot reflect about, what really happens in an Indigenous settlement in reality... it looks like a beautiful landscape when people show the forest on TV programs, magazines, and social media. It is a picture of a perfect world. However, in reality, the forest is dying day by day because of money. All natural resources are being destroyed and becoming scarce daily'. (Tree, Male; FGD 2)

### 4.4 | Tensions Arising and Navigation Approaches

Social media participation enables the community to secure its goals to protect and sustain its ways of life and nature through value appropriation and creation. However, their participation also presents multiple tensions that are also at odds with these goals. A key concern among respondents, especially the elderly and parents, was the risk of detachment from Guarani values when engaging on social media to appropriate and/or create social and environmental value. The social implications were primarily spending less time on activities that the community values as more time got diverted to social media as well as being virtually exposed to outside world influences. In terms of the environment, the concern was that this could lead to a loss of connection to nature as users spent more time on social media indoors than outside in nature.

'In using social media mostly for entertainment, young people do not do things that please our ancestors, such as going to textrahe praying house, having meaningful conversations with family and friends, listening to the elderly, and especially being in and caring for the forest... kids, using these platforms for watching cartoons, are getting detached from our way of living, they don't play in and enjoy the forest as much as they used to... All of this, in my view, can weaken our way of living as they are somehow distancing themselves from Mother Nature. As such, I fear that many of our ancestral practices to protect the forest and guarantee that it is still here for future generations may get lost in the future...' (Thunder, Male, FGD 2)

That said, the tension between detachment and the benefits of social media participation was apparent to members of the community. This was reflected during an FGD with mature members of the community with different leadership roles (e.g., in education, culture, handicraft production and health).

'I think that social media can make us lose connection with the people we love and care about, but they can also help in many ways'. (Butterfly, Female, FGD 2)

Another concern is the risk of exposing sacred aspects of Guarani life on social media. Socially, there are practices (e.g., rituals and traditions) that the community deems should only be known by the Indigenous community. Where these can be revealed to the outside world, only guests to the reserve can participate, but they are never recorded. The second author, for example, was invited to participate in a healing ceremony during their second visit to the reserve and no mobile devices were allowed into the venue. Environmentally, some places are considered sacred and are also kept from social media and revealed only to selected guests of the reserve. Given these concerns, members of the community are urged to exercise caution when they post things on social media.

'Each Guarani needs to be cautious about what they post on social media because it can attract the wrong people into the reserve. The other day, a guy posted about an exotic bird he found in the forest during his trek. The next day, several people contacted us and requested a visit to see that bird. I am sure most of them were nice people who just wanted to see that natural beauty, but we never know...' (Cloud, Male).

While the community members have full control over what they post, guests have limited rights (e.g., tourists who visit the reserve). Socially, there is concern that outsiders who are granted access to the reserve will post things that the community wants to keep private or that will be taken out of context and potentially reinforce stereotypes. In terms of the environment, the biggest concern is that revealing some things in nature can attract illegal exploitation of natural resources inside the reserve and general deterioration of the forest.

'In my opinion, social media use by people from the reserve has good and bad sides for the community. Thus, people need to reflect about and know how to use it. On the one hand, it can contribute. For example, we can use it to help us defend and protect nature (...). On the other hand, the use of social media can also be harmful given that it can bring attention to our natural resources and attract the wrong people to our reserve'. (Butterfly, Female)

The tensions arising from social media participation are worth addressing, given the significant benefits of social media participation (Section 4.3). We now present findings on

how the studied community navigates the tensions to realise the benefits.

# **4.4.1** | Navigation Approaches to Deal With Detachment From Ways of Life and Nature

The community follows two key approaches to addressing the risk of becoming detached. The first involves managing their own behaviour with respect to social media use so as to stay connected to their ways of life and nature. Specifically, they pursue digital minimalism/goal-oriented use. Some members of the community separate time with family or in nature from time on their devices to stay connected. For example, a mother explained that her children are allowed time on social media after they have done 'things that we value as Guaranis' like talking to their grandparents and going to the praying house (Rain—Female). Another parent stated that he leaves his phone behind when he goes out with his children or to meditate in the forest. A young person described the changes in his relationship with social media over time as follows:

'When I was younger, I went through a phase when I just wanted to watch videos and search for music on YouTube, I could not stop. Then, my grandfather, who is now with the ancestors, was really patient and talked a lot to me about this. He used to say that this use was making me sick, it was messing with my head. I almost got depressed... He helped me realise that I was wasting my time and that I should value our sacred traditions. After that, I massively reduced the use of social media and started to connect more with the traditional aspects related to our way of living'. (Octopus, Male, FGD 2)

Still on goal-oriented use, even though social media habits are down to individual/ family choice, the community plays a role in shaping individuals' actions and choices. Some influential members of the community reinforce the need to be careful about the dangers of detachment. During the Focus Group 2 discussion, a community member stated his role in this regard as follows:

'In the praying house, I tell the young people to think carefully about how they are using social media. By being very connected they tend to look at a limited screen and get super attached to that. As a result, they miss the bigger and more important picture, the people, the forest, and life in general...' (Owl, Male, FGD2)

The second navigation approach entails contributing to social media content rather than being passive consumers. As presented in Section 4.3.2, the community puts on content on ways of life and practices rooted in nature. This enables the community to think about the importance of how they live, and some reported that they feel a sense of pride from educating others about themselves. It, therefore, seems that the community takes a *give-and-take* approach to social media participation in order to stay connected to its fundamental values.

# **4.4.2** | Navigation Approaches to Deal With Exposure of Sacred Ways of Life and Places

Exposure can originate from the community's own posting behaviour in an effort to create social or environmental value. However, it can also come from third parties from the outside world. Therefore, the community has internal approaches for managing its own behaviour as well as approaches for managing outsiders.

Internally, closed social media are used for sacred aspects of life and nature; access is only limited to community members. The community also has hard rules about ceremonies that cannot be recorded, especially in video format. Some information is shared in audio format that benefits different members of the community. For example, some healers make WhatsApp voice notes about healing ceremonies and plants for the sick. Ultimately, they either *limit* the reach of what gets recorded through the use of closed platforms and *desist* from recording videos of their most sacred practices or nature.

For people from the outside world, a two-pronged approach is taken. In the first instance, the community attracts the public through their social media pages. However, if they wish to visit the reserve, the community leader vets and determines who gets access. Some visitors do not establish contact via social media (e.g., researchers and activist organisations). In this instance, the community leader still controls who ultimately has access. For both groups of visitors, members of the community monitor the behaviour of those granted access to prevent them from recording material that the community does not want to be shared on social media. The second author experienced and observed both. When they established contact with the community leader to visit the reserve, the leader asked for our field visit plans in writing ahead of arrival. The second author understood why during their first in-person meeting with the leader:

'We are not lab rats, where people come, get what they want, and leave. We do not accept people like this. We want people who come, learn, but want to contribute to the community as well... All visits are planned and agreed upon. No one can come here and start interviewing or filming our people. We need to know why they are here and we have to grant permission first'. (Lion, Male)

Data collected through observation confirmed this approach. On day four of the visit, a group of tourists was visiting the community and one of them was constantly recording videos and taking pictures. When he started recording children playing, one of the community members kindly asked him to stop, informing him that this was not allowed. Overall, the community both *attracts* visitors through their social media pages but *limits physical access* to the reserve and *denies outsiders* the opportunity to record anything that they do not want to end up on social media.

# 4.4.3 | Navigation Approaches to Deal With Exploitation by People From the Outside World

Concerns about exploitation are based on the behaviour of people from the outside world. Exploitation relates to the use of materials recorded from the reserve for personal gain or putting out material that can lead to unwanted attention from the outside world. Some major risks identified by respondents include attracting illegal, exploitative activities into the reserve (e.g., poaching and wood cutting), footage taken out of context, and concerns about the deterioration of nature in general.

Similar to the approach taken where there is a risk of exposure by outsiders, the community generally limits access and manages the behaviour of invited outsiders by denying recording. However, this is largely related to social issues. In relation to the environment, we find that in some instances, the community openly shares information and seeks allies (from other Indigenous communities or the outside world) to help in their fight against exploitation. We found significant content from the community on third parties' YouTube channels (e.g., government, environmentalists, tourism agencies and tourist guides); they are seen as allies who share the communities' interests. The community follows them and uses their social media content to get news on issues that affect them, especially in relation to environmental and climate issues. The following quote specifically exemplifies how they use social media to emphasise the need for Indigenous political participation for advocacy.

'By being online, we can show the world that we need Indigenous people representations in multiple spaces, including politics, regardless of which ethnic group. Indigenous people, in general, share needs, beliefs, and values related to nature protection. We need those type of people in the power positions, not people that don't understand us, that will tell us that this is not the right way of living, and that don't understand the sacred and important role of nature and our mission to protect it. It's time for us, Indigenous people from all ethnic groups, to join our efforts to have voice and occupy the spaces'. (Lightening, Male)

Overall, the community also seeks a balance between what is shared on open platforms like YouTube and Facebook pages and what they share on closed platforms. An example is information that is shared for the purpose of raising awareness. In some instances, information flows are bidirectional (e.g., befriending outsiders on social media). While outward flows are often publicly accessible, bi-directional flows are often private (e.g., direct messaging on Facebook and WhatsApp).

'The social media that I use the most is WhatsApp. I love talking to my friends—Indigenous and non-Indigenous ones. Especially with the non-Indigenous, I like sharing about different aspects of life. I think this is a powerful way for me to teach them about our way of living and to learn about theirs'. (Flower, Female)

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When it comes to threats to the environment due to illegal activity, the community uses a combination of closed platforms (e.g., reporting illegal activities within the reserve to the police via WhatsApp) and open platforms with a mix of outward (e.g., posting videos and tagging influential people) or bi-directional (where they publicly interact with allies) flows of information.

Table 2 summarises our key findings in relation to tensions arising from social media participation and associated navigation approaches. Specifically, we present the navigation approaches relative to the experienced tensions in relation to the risks of detachment, exposure, and exploitation related to social media participation.

Navigation approaches/ Strategies	Description	Tensions	Key enabling activities	
Goal-oriented use	Mindful participation on social media/use of mobile devices	Detachment from ways of life and nature (e.g., spending less time on daily aspects of Guarani life and virtual exposure to outside world influences)	Limiting connection time Leaving the phone behind Separating connection time from family time	
Give-and-take	Share Indigenous knowledge/information alongside accessing the outside world knowledge/information	Detachment from ways of life and nature (e.g., excessive screen time)	Publishing content on ways of life and practices rooted in nature	
Attract but limit	Attract visitors to the reserve using social medial but limit who is granted access	Exposure of sacred ways of life and places (e.g., online misrepresentation of private aspects of daily life by unvetted guests from the outside world)	Sharing content about nature and culture that can attract visitors into the reserve Limiting/controlling who is granted physical access to the reserve	
Limit	Limit reach of all recorded content	Exposure of sacred ways of life and places/ nature (e.g., share sacred rituals, practices, and/ or traditions to the outside world)	Sharing content only on closed platforms that can be accessed	
Desist	Not publishing sacred elements of their life	Exposure of sacred ways of life and places (e.g., share sacred rituals, practices, and/or traditions to the outside world)	Avoid making video recordings of content that is deemed most sacred, but share knowledge through audio recordings in the native language (oral tradition extended into the social media spaces)	
Limit and deny	Limit access to sacred places and refuse any form of recording	Exposure of sacred ways of life and places (e.g., showing sacred places to the outside world) Exploitation by people from the outside world (e.g., footage made public and taken out of context)	Agreeing visits from outsiders beforehand Limiting their access to certain places Denying recording of sacred elements/daily life	
Openly share and seek allies	Openly share material on the state of the environment/illegal activities and seek allies to fight against this from the outside world	Exploitation by people from the outside world (e.g., degradation of forest by outsiders)	Sharing content online about nature and culture that can attract allies (stakeholders with similar interests)	

#### 5 | Discussion

This section first summarises key theoretical insights from our findings. Thereafter, we discuss the implications and contributions of this research. Specifically, the discussion centres on digital platforms, emphasising broader implications given that social media platforms are a type of digital platform. We conclude the section with a presentation of limitations and opportunities for future research.

#### 5.1 | Key Theoretical Insights

This research sought to understand the tensions associated with social media, specifically focusing on participation by Indigenous communities on social media for the purpose of creating and appropriating social and environmental value. Indigenous communities are vulnerable as they face threats to fundamental aspects of their lives and their very existence (Redvers et al. 2023). The Indigenous community we studied seeks to protect and sustain (i) its ways of life and (ii) nature. These are fundamental goals intricately connected with their traditional values and practices passed down over thousands of years. While social media participation presents an opportunity for the community to realise these goals, it also brings about key tensions that augment existing threats or create new ones. Specifically, we uncover unique tensions faced by the community when engaging on social media, which we broadly categorise as detachment, exposure and exploitation. We adopt a two-eyed seeing approach (Bartlett, Marshall, and Marshall 2012; Wright et al. 2019) to establish whether and how the community responds to these tensions to get the best of both worlds: Indigenous and outside.

We find that the community benefits from social media participation through value appropriation and creation. Value appropriation primarily benefits the community, and value creation primarily benefits the outside world but can also immensely benefit the community. For example, by putting out content that educates the public on their ways of life, the community fights prejudice and discrimination against them. Connecting our findings with previous research, we see parallels with Mashayekhi and Head's (2022) work. Specifically, we find that while value creation involves what they frame as 'active participation in social media' (meaning that users generate content and react to others' posts), our notion of value appropriation is connected with their 'passive consumption of social media' (meaning that users passively consume and/or engage in contents, such as others' posts and newsfeeds).

All tensions identified are linked to social and environmental benefits, but there are differences in how the community navigates them. To deal with the risk of detachment from ways of life and nature, the community either pursues goal-oriented use (in relation to ways of life) or give-and-take (in relation to ways of life and nature). We call this a balanced strategy as they combine Indigenous and outside world perspectives (Wright et al. 2019). This strategy enables the community to benefit from social media participation while staying true to its core values. For instance, findings show that being aware of other ways of life through social media participation

reinforces pride in own ways of life and unique traditions. Moreover, it enables them to understand how the outside world perceives them. In turn, they can appropriately show and educate the world about their ways of life to challenge stereotypes. This aligns with the assertion that considering both the outside world and Indigenous world perspectives improves benefits to Indigenous people (e.g., Bartlett, Marshall, and Marshall 2012; Wright et al. 2019).

Regarding exposure, we found that the community deals with this tension by limiting outsider recording of sacred practices, access to sacred places, and/or desisting from recording in the first place. This is in line with Tempini's (2017) work about the importance of an integrated, community-driven approach to social media participation and with Mashayekhi and Head's (2022) emphasis on the importance of belonging to a community. This reflects that the perspective on the tension is viewed overwhelmingly from the 'Indigenous eye' (Ruwhiu and Cathro 2014; Smith and Michie 2019). We call this a leaning-in strategy. This strategy exposes the aspect of the community's lives that are not up for compromise—they are extremely protective of it. We argue that this allows them to exploit the best part of social media participation (increasing awareness about their ways of life) while retaining control over narratives and sacred practices through setting boundaries for engagement with the outside world. Interestingly, the community takes two radically different approaches to deal with the risk of exploitation by outsiders. For risks relating to ways of life, the community follows limit and deny, while for risks pertaining to nature, they openly share and seek allies (Table 2). The former is a leaning-in strategy; we refer to the latter as a leaning-out strategy whereby the perspective emphasises the perspective of the outside world. It appears that the leaning-in strategy enables effectively dealing with the risks related to the exploitation of their ways of life in similar ways we have described for exposure: it enables the community to have control over, and protect, what they value the most (e.g., sacred rituals and healing ceremonies). For exploitation related to nature, different dynamics seem to be at play. The shared views about environmental preservation by the outside world enable them to bring attention to issues affecting them that they cannot fight back against (e.g., poaching). The leaning-out strategy allows them to find allies from the outside world who can fight alongside them to help them protect nature.

# 5.2 | Contributions and Implications for Research and Practice

This research answers calls for non-Western perspectives in studying digital platforms (Elbanna and Idowu 2022), particularly for incorporating Indigenous perspectives in understanding IS phenomena (Abubakre, Faik, and Mkansi 2021; Chughtai et al. 2020; Chughtai and Young 2022). We contribute to the literature by identifying three distinct tensions and corresponding navigation strategies unique to Indigenous communities. By unveiling key tensions underlying social media participation by Indigenous people, it especially contributes to the literature streams on (i) digital platforms and indigeneity, and (ii) digital platforms and non-economic value. We discuss these next, including implications for research and practice.

# 5.2.1 │ Indigeneity and Digital Platforms: Tensions and Navigation Approaches

Our study advances the literature on tensions related to deriving non-economic value from digital platforms (e.g., Nicholson et al. 2019, 2022) by identifying three distinct tensions unique to Indigenous communities (i.e., detachment, exposure and exploitation) and identifying corresponding navigation strategies (balanced, leaning-in, and leaning-out). Specifically, we add two key contributions to the literature stream at the intersection of digital platforms and Indigenous communities.

First, we build upon existing studies on the role of social media in various contexts such as 'favelas', healthcare, and environmental movements (Nemer 2016; Goh, Gao, and Agarwal 2016; Kallinikos and Tempini 2014; Tim et al. 2018) to offer novel insights on social media participation by Indigenous communities. We show that social media use by Indigenous communities leads to specific tensions as these communities try to balance the use of social media with their desire to preserve their ways of life and protect the natural environment. In this respect, our paper explains this complex milieu, illustrating that social media participation is not straightforward, as it creates both benefits and risks. By employing the two-eyed seeing approach, we were able to identify the tensions of detachment, exposure and exploitation. This approach enabled a balanced perspective, integrating Indigenous knowledge systems with Western knowledge systems digital practices (Bartlett, Marshall, and Marshall 2012), thus revealing the complex dynamics at play. By employing this approach, we were able to provide a more nuanced understanding of how Indigenous communities navigate the digital landscape, highlighting the dual role of social media as both a tool for empowerment and a potential source of cultural disruption.

Indigenous perspectives are often overlooked in mainstream social media research. Our work contributes to a more comprehensive understanding of Indigenous communities' use of digital platforms, responding to calls for research that integrates Indigenous perspectives with different streams of research (Salmon, Chavez, and Murphy 2023). The tensions experienced by the Indigenous community relate to their fundamental goals to protect and sustain their way of life. In this respect, we found that social media participation only helps the Guarani people achieve their goals (e.g., cultural preservation, community building, and advocacy) when/if the related tensions are effectively navigated. By identifying these tensions and navigation strategies, we enrich earlier research that has highlighted the challenges Indigenous communities face, in reconciling their values with living in a digitalized world, and their unique experiences in using digital technologies (Abubakre, Faik, and Mkansi 2021; Diaz Andrade et al. 2021). We also illustrate how their social media participation and related tensions go beyond the typical usage patterns seen in mainstream contexts such as entertainment or online reviews (Luo and Zhang 2013; Li 2018). By actively engaging on social media, these communities not only assert their presence in the digital world but also create opportunities for cultural exchange and education. This extends the understanding of social media's role from mere communication or entertainment to a powerful medium for cultural sustainability and preservation.

Second, we explain how Indigenous people navigated tensions by shaping their use of social media. This includes balancing the opportunities provided by social media with the need to protect their cultural integrity and environmental resources. Our findings extend the existing literature, such as the works by Laurell and Sandström (2017), by focusing on the unique tensions and navigation strategies within Indigenous contexts. In navigating the tensions, the Guarani foregrounded the importance of maintaining their core values by balancing the risks and benefits of engaging on social media. For example, our findings show that when Indigenous communities encounter the tension of cultural detachment due to social media use, they may employ minimalism and give-and-take approaches, which involves engaging with social media in a way that is conscious and mindful of its potential impacts on their traditional way of life. This approach helps to preserve their core values while allowing them to appropriate and create value from social media, such as gaining knowledge about environmental conservation techniques or connecting with allies in their advocacy efforts. We highlight the importance of their traditional values as a central idea in their navigating the tensions by drawing on the notion of a twoeyed seeing approach (Bartlett, Marshall, and Marshall 2012; Rowan et al. 2015).

#### 5.2.2 | Digital Platforms and Non-economic Value

Next to extending insights on tensions and navigation strategies in relation to social and environmental value, our research also bears implications for the literature on digital platforms and non-economic value. This literature has examined topics such as healthcare related knowledge and information sharing (Kallinikos and Tempini 2014; Goh, Gao, and Agarwal 2016), responsible innovation (Ahuja, Chan, and Krishnamurthy 2023), collective actions (Spagnoletti, Resca, and Lee 2015), refugee management (Madon and Schoemaker 2021) and platformenabled development (Bonina et al. 2021). However, it focuses on single entities using digital platforms and the benefits they derive from that use. Whereas Chamakiotis, Petrakaki, and Panteli (2021) have shown how social value is created to benefit different individuals within the platform with shared objectives and values, our findings broaden existing perspectives by showing that Indigenous communities utilise social media platforms not only for their own benefit but also to generate value for a variety of stakeholders, including those beyond their immediate community. This collective approach contrasts with the traditional focus on individual users (Wright et al. 2019), revealing how the dynamics and interactions within a community can lead to unique outcomes and benefits. These insights underscore the need for further research into the dual role of social media in user communities, particularly in understanding how collective participation creates value that extends to other entities. This shift from an individual to a collective perspective offers a significant contribution, highlighting the broader impact of community engagement on social media.

Furthermore, we offer novel insights into the under-studied dimension of environmental value. Our findings contribute to understanding social media as a digital platform for connecting Indigenous communities and ways in which they engage to protect and sustain their cultural heritage and environmental values. Whereas users generally want to forget and delete their social media postings over time (Wang et al. 2011; Kwak, Lee, and Lee 2021), the Indigenous communities view the use of social media as an opportunity to share valuable knowledge that could otherwise get lost in the future. Furthermore, given that they experience existential threats more profoundly than other groups, the Indigenous community is eager to maintain their distinctive cultural identity and heritage amidst globalisation and digital assimilation. In this line, our discussion of environmental value goes beyond the context of urban–rural disparities and development highlighted by Chamakiotis, Petrakaki, and Panteli (2021) and Goh, Gao, and Agarwal (2016), demonstrating the unique ways Indigenous communities use social media for environmental preservation.

### 5.2.3 | Implications for Practice

We identify implications for three stakeholders, namely, governments, developers of digital platforms and Indigenous communities.

Governments should recognise the demonstrated potential of social media as a tool for creating value for Indigenous communities. Based on our findings, the studied community has successfully navigated tensions such as detachment from daily life and the risk of online misrepresentation by implementing strategies like limiting connection time, controlling what is recorded by outsiders, and selectively publishing content about their ways of life. Therefore, governments hosting Indigenous communities could develop policies that facilitate their fight against exploitation by outsiders and ensure that their voices are heard and respected in digital spaces. In this respect, the strategies identified in our study can be applied to assist Indigenous communities in navigating social media effectively. For instance, strategies like 'Give-and-take' and 'Limit and deny' show how communities can share knowledge while protecting sacred traditions and controlling outsiders' recordings of sacred elements. These approaches help maintain a balance between showcasing culture and protecting sensitive aspects of Indigenous life.

Developers of digital platforms should consider the unique needs and challenges faced by Indigenous communities. They could create features that detect and disincentivize third parties from publishing sacred content and provide greater control over content visibility for Indigenous users. For example, allowing more granular control over who can view and share their content can help protect sacred rituals and traditions.

Indigenous communities can adopt various strategies to navigate social media effectively, such as goal-oriented use, limiting the reach of content, and openly sharing material to seek allies. Each community should determine when each strategy is appropriate. By strategically engaging with social media, Indigenous communities can harness its power to preserve their environment and ways of life while deriving value for both them and the outside world.

#### 5.3 | Limitations and Future Research

Our research is not without limitations. First, gaining access to the Indigenous community presented a significant challenge due to their reserved nature and closed stance towards the outside world. To overcome this, obtaining data directly from members of this community required extensive planning and dedication, to first establish trust with the community leader, and thereafter with the community members. Such effort was necessary and critical to conducting our study. However, this limited our ability to conduct prolonged observations or repeated visits, which may have impacted the depth of our findings. Furthermore, our study focused on the community's use of social media, which may not fully capture the breadth of their social interactions and cultural expressions. Important nuances and offline activities that contribute to their social dynamics and cultural preservation could have been overlooked. By acknowledging these limitations, we aim to provide a clearer understanding of the study's boundaries and highlight areas where future research can build and improve upon our work.

Our findings provide a good ground for future research. One key area for future studies involves tensions and navigation strategies. First, the investigation of tensions faced by Indigenous people in other contexts would be extremely important in testing and extending our findings. Second, the research could dig deeper into the navigation strategies found to identify enabling mechanisms, necessary conditions, limitations and outcomes to improve and assess how effective these approaches are for Indigenous communities. Other research avenues include investigating the mechanisms through which social media engagement leads to beneficial real-world outcomes. For example, future research can examine whether Indigenous communities' online presence influences the attitudes and behaviours of outsiders in relation to combating stereotypes. In addition, future research could explore whether there is collaborative value creation between researchers and Indigenous communities, for example, with respect to preserving cultural and natural heritage. Additionally, Guarani finding partners through social media and thereby contributing to preserving their traditions, presents an interesting topic for further investigation. More broadly, future studies could examine the role of social media, and digital technologies, in the 'immortalisation' of Indigenous cultures.

#### **Data Availability Statement**

Research data are not shared.

#### **Endnotes**

- $^{\rm 1}{\rm Social}$  media are platforms that enable creation and exchange of user generated content.
- <sup>2</sup> Although the total time spent in the reserve is short for a typical ethnographic study, it is important to note that there are ethnographic studies with comparable time periods (e.g., Stephens 2021). We describe our study as having 'ethnographic elements' because at the time of the first visit, the relationship with the community was still being established. This lack of intimate knowledge at that stage implies that more time would have been needed for this study to be considered ethnographic.

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#### References

- Abubakre, M., I. Faik, and M. Mkansi. 2021. "Digital Entrepreneurship and Indigenous Value Systems: An Ubuntu Perspective." *Information Systems Journal* 31, no. 6: 838–862.
- Ahuja, S., Y. E. Chan, and R. Krishnamurthy. 2023. "Responsible Innovation With Digital Platforms: Cases in India and Canada." *Information Systems Journal* 33. no. 1: 76–129.
- Banerjee, S. B., and S. Linstead. 2004. "Masking Subversion: Neocolonial Embeddedness in Anthropological Accounts of Indigenous Management." *Human Relations* 57, no. 2: 221–247.
- Bartlett, C., M. Marshall, and A. Marshall. 2012. "Two-Eyed Seeing and Other Lessons Learned Within a Co-Learning Journey of Bringing Together Indigenous and Mainstream Knowledges and Ways of Knowing." *Journal of Environmental Studies and Sciences* 2: 331–340.
- Belanger, F. 2012. "Theorising in Information Systems Research Using Focus Groups." *Australasian Journal of Information Systems* 17, no. 2: 109–135
- Benbasat, I., D. K. Goldstein, and M. Mead. 1987. "The Case Research Strategy in Studies of Information Systems." *MIS Quarterly* 11, no. 3: 369–386.
- Bhawra, J., M. C. Buchan, B. Green, K. Skinner, and T. R. Katapally. 2022. "A Guiding Framework for Needs Assessment Evaluations to Embed Digital Platforms in Partnership With Indigenous Communities." *PLoS One* 17, no. 12: e0279282.
- Bonina, C., K. Koskinen, B. Eaton, and A. Gawer. 2021. "Digital Platforms for Development: Foundations and Research Agenda." *Information Systems Journal* 31, no. 6: 869–902.
- Brandt, T., J. Bendler, and D. Neumann. 2017. "Social Media Analytics and Value Creation in Urban Smart Tourism Ecosystems." *Information & Management* 54, no. 6: 703–713.
- Brookshire, D., and N. Kaza. 2013. "Planning for Seven Generations: Energy Planning of American Indian Tribes." *Energy Policy* 62: 1506–1514.
- Chamakiotis, P., D. Petrakaki, and N. Panteli. 2021. "Social Value Creation Through Digital Activism in an Online Health Community." *Information Systems Journal* 31, no. 1: 94–119.
- Chughtai, H., M. D. Myers, A. G. Young, et al. 2020. "Demarginalising Interdisciplinarity in IS Research: Interdisciplinary Research in Marginalisation." *Communications of the Association for Information Systems* 46, no. 1: 296–315.
- Chughtai, H., and A. G. Young. 2022. "Call for Papers: Decoloniality in Information Systems Research." *Information Systems Journal*. https://onlinelibrary.wiley.com/pb-assets/assets/13652575/ISJ%20SI%20DEC-1666175899430.pdf.
- Diaz Andrade, A., A. A. Techatassanasoontorn, H. Singh, and N. Staniland. 2021. "Indigenous Cultural Re-Presentation and Re-Affirmation: The Case of Māori IT Professionals." *Information Systems Journal* 31, no. 6: 803–837.
- Dubois, A., and L. E. Gadde. 2002. "Systematic Combining: An Abductive Approach to Case Research." *Journal of Business Research* 55, no. 7: 553–560.
- Dumont, G. 2022. "Immersion in Organizational Ethnography: Four Methodological Requirements to Immerse Oneself in the Field." *Organizational Research Methods* 26, no. 3: 441–458.
- Elbanna, A., and A. Idowu. 2022. "Crowdwork, Digital Liminality and the Enactment of Culturally Recognised Alternatives to Western Precarity: Beyond Epistemological Terra Nullius." *European Journal of Information Systems* 31, no. 1: 128–144.
- Gioia, D. A., K. G. Corley, and A. L. Hamilton. 2013. "Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology." *Organizational Research Methods* 16, no. 1: 15–31.

- Gladstone, J. S., and D. D. Pepion. 2017. "Exploring Traditional Indigenous Leadership Concepts: A Spiritual Foundation for Blackfeet Leadership." *Leadership* 13, no. 5: 571–589.
- Goh, J. M., G. Gao, and R. Agarwal. 2016. "The Creation of Social Value." MIS Quarterly 40, no. 1: 247–264.
- Grodal, S. 2018. "Field Expansion and Contraction: How Communities Shape Social and Symbolic Boundaries." *Administrative Science Quarterly* 63, no. 4: 783–818.
- Groenfeldt, D. 2003. "The Future of Indigenous Values: Cultural Relativism in the Face of Economic Development." *Futures* 35, no. 9: 917–929.
- Hatcher, A., and C. Bartlett. 2010. "Two-Eyed Seeing: Building Cultural Bridges for Aboriginal Students." *Canadian Teacher Magazine* 6, no. 5: 14–17.
- Hatcher, A., C. Bartlett, M. Marshall, and A. Marshall. 2009. "Two-Eyed Seeing: A Cross-Cultural Science Journey." *Green Teacher* 86: 3.
- Henry, E. Y., L. P. Dana, and P. J. Murphy. 2018. "Telling Their Own Stories: Māori Entrepreneurship in the Mainstream Screen Industry." *Entrepreneurship & Regional Development* 30, no. 1–2: 118–145.
- Hewitson, G. 2013. "Economics and the Family: A Postcolonial Perspective." *Cambridge Journal of Economics* 37, no. 1: 91–111.
- Hu, T. E., H. Dai, X. Luo, C. Guo, and D. Liu. 2023. "The Role of the Espoused Tight Culture in Value Assessment of Social Media Use." *European Journal of Information Systems* 33, no. 5: 674–698.
- Huijser, H., and J. Bronnimann. 2014. "Exploring the Opportunities of Social Media to Build Knowledge in Learner-Centered Indigenous Learning Spaces." In *Educating in Dialog Constructing Meaning and Building Knowledge With Dialogic Technology*, edited by S. Feller and I. Yengin, 9–11. Amsterdam, the Netherlands: John Benjamins Publishing Company.
- Jackson, T. 2013. "Reconstructing the Indigenous in African Management Research: Implications for International Management Studies in a Globalized World." *Management International Review* 53: 13–38.
- Kallinikos, J., and N. Tempini. 2014. "Patient Data as Medical Facts: Social Media Practices as a Foundation for Medical Knowledge Creation." *Information Systems Research* 25, no. 4: 817–833.
- Karanasios, S., A. Adrot, P. Hayes, and V. Cooper. 2023. "The Interplay of Logics and Social Media: An Organisational Field Perspective." *Information Systems Journal* 34, no. 1: 80–124.
- Kukutai, T., and J. Taylor. 2016. *Indigenous Data Sovereignty: Toward an Agenda*. Canberra, Australia: ANU press.
- Kwak, C., J. Lee, and H. Lee. 2021. "Could You Ever Forget Me? Why People Want to Be Forgotten Online." *Journal of Business Ethics* 179: 1–18.
- Laurell, C., and C. Sandström. 2017. "The Sharing Economy in Social Media: Analyzing Tensions Between Market and Non-market Logics." *Technological Forecasting and Social Change* 125: 58–65.
- Li, X. 2018. "Impact of Average Rating on Social Media Endorsement: The Moderating Role of Rating Dispersion and Discount Threshold." *Information Systems Research* 29, no. 3: 739–754.
- Lin, C. I., F. Y. Kuo, and M. D. Myers. 2015. "Extending ICT4D Studies." *MIS Quarterly* 39, no. 3: 697–712.
- Lindgren, S., and C. Cocq. 2017. "Turning the Inside Out: Social Media and the Broadcasting of Indigenous Discourse." *European Journal of Communication* 32, no. 2: 131–150.
- Lu, Y., P. V. Singh, and B. Sun. 2017. "Is a Core–Periphery Network Good for Knowledge Sharing? A Structural Model of Endogenous Network Formation on a Crowdsourced Customer Support Forum." *MIS Quarterly* 41, no. 2: 607–628.

Luo, X., and J. Zhang. 2013. "How Do Consumer Buzz and Traffic in Social Media Marketing Predict the Value of the Firm?" *Journal of Management Information Systems* 30, no. 2: 213–238.

Lupien, P. 2020. "Indigenous Movements, Collective Action, and Social Media: New Opportunities or New Threats?" *Social Media + Society* 6, no. 2: 2056305120926487.

Madon, S., and E. Schoemaker. 2021. "Digital Identity as a Platform for Improving Refugee Management." *Information Systems Journal* 31, no. 6: 929–953.

Marshall, A., and C. Bartlett. 2010. *Two-Eyed Seeing*. Integrative Science. December 7, 2023. http://integrativescience.ca/.

Mashayekhi, M., and M. Head. 2022. "Developing Social Capital Through Professionally Oriented Social Network Sites." *Information & Management* 59, no. 6: 103664.

McKeon, M. 2012. "Two-Eyed Seeing Into Environmental Education: Revealing Its "Natural" Readiness to Indigenize." *Canadian Journal of Environmental Education (CJEE)* 17: 131–147.

Millaleo Hernández, S. A. 2020. "Digital Activism and the Mapuche Nation in Chile." In *Digital Activism, Community Media, and Sustainable Communication in Latin America*, 221–243. Cham, Switzerland: Palgrave Macmillan.

Miller, S., P. Tait, and C. Saunders. 2015. "Estimating Indigenous Cultural Values of Freshwater: A Choice Experiment Approach to Māori Values in New Zealand." *Ecological Economics* 118: 207–214.

Mirbabaie, M., D. Bunker, S. Stieglitz, J. Marx, and C. Ehnis. 2020. "Social Media in Times of Crisis: Learning From Hurricane Harvey for the Coronavirus Disease 2019 Pandemic Response." *Journal of Information Technology* 35, no. 3: 195–213.

Myers, M. D. 1999. "Investigating Information Systems With Ethnographic Research." *Communications of the Association for Information Systems* 2, no. 1: 23.

Myers, M. D., H. Chughtai, E. Davidson, P. Tsibolane, and A. G. Young. 2020. "Studying the Other or Becoming the Other: Engaging With Indigenous Peoples in IS Research." *Communications of the Association for Information Systems* 47, no. 1: 382–396.

Myers, M. D., and G. Walsham. 1998. "Interpretive Research in Information Systems." *Journal of Information Technology* 13, no. 4: 233-234.

Nemer, D. 2016. "Online Favela: The Use of Social Media by the Marginalized in Brazil." *Information Technology for Development* 22, no. 3: 364–379.

Nicholson, B., P. Nielsen, J. Sæbø, and S. Sahay. 2019. "Exploring Tensions of Global Public Good Platforms for Development: The Case of DHIS2." In *International Conference on Social Implications of Computers in Developing Countries*, 207–217. Cham: Springer International Publishing.

Nicholson, B., P. Nielsen, S. Sahay, and J. I. Sæbø. 2022. "Digital Public Goods Platforms for Development: The Challenge of Scaling." *Information Society* 38, no. 5: 364–376.

Nili, A., M. Tate, and D. Johnstone. 2017. "A Framework and Approach for Analysis of Focus Group Data in Information Systems Research." *Communications of the Association for Information Systems* 40: 1–21.

Poland, B. D. 1995. "Transcription Quality as an Aspect of Rigor in Qualitative Research." *Qualitative Inquiry* 1, no. 3: 290–310.

Prasad, D., G. S. Vozikis, and M. Ariff. 2006. "Government Public Policy, Regulatory Intervention, and Their Impact on IPO Underpricing: The Case of Malaysian IPOs." *Journal of Small Business Management* 44, no. 1: 81–98.

Putnam, L. L., G. T. Fairhurst, and S. Banghart. 2016. "Contradictions, Dialectics, and Paradoxes in Organizations: A Constitutive Approach." *Academy of Management Annals* 10, no. 1: 65–171.

Rajão, R., and C. Marcolino. 2016. "Between Indians and "Cowboys": The Role of ICT in the Management of Contradictory Self-Images and the Production of Carbon Credits in the Brazilian Amazon." *Journal of Information Technology* 31, no. 4: 347–357.

Redvers, N., P. Aubrey, Y. Celidwen, and K. Hill. 2023. "Indigenous Peoples: Traditional Knowledges, Climate Change, and Health." *PLOS Global Public Health* 3, no. 10: e0002474.

Rice, E. S., E. Haynes, P. Royce, and S. C. Thompson. 2016. "Social Media and Digital Technology Use Among Indigenous Young People in Australia: A Literature Review." *International Journal for Equity in Health* 15, no. 1: 1–16.

Rowan, M., N. Poole, B. Shea, et al. 2015. "A Scoping Study of Cultural Interventions to Treat Addictions in Indigenous Populations: Methods, Strategies and Insights From a Two-Eyed Seeing Approach." *Substance Abuse Treatment, Prevention, and Policy* 10: 1–10.

Ruwhiu, D., and V. Cathro. 2014. "Eyes-Wide-Shut." *Emergence: Complexity & Organization* 16, no. 4: 1–11.

Sæbø, Ø., T. Federici, and A. M. Braccini. 2020. "Combining Social Media Affordances for Organising Collective Action." *Information Systems Journal* 30, no. 4: 699–732.

Saifee, D. H., Z. Zheng, I. R. Bardhan, and A. Lahiri. 2020. "Are Online Reviews of Physicians Reliable Indicators of Clinical Outcomes? A Focus on Chronic Disease Management." *Information Systems Research* 31, no. 4: 1282–1300.

Salmon, E., R. J. F. Chavez, and M. Murphy. 2023. "New Perspectives and Critical Insights From Indigenous Peoples' Research: A Systematic Review of Indigenous Management and Organization Literature." *Academy of Management Annals* 17, no. 2: 439–491.

Scott, M., W. DeLone, and W. Golden. 2016. "Measuring eGovernment Success: A Public Value Approach." *European Journal of Information Systems* 25, no. 3: 187–208.

Shoufan, A. 2019. "Estimating the Cognitive Value of YouTube's Educational Videos: A Learning Analytics Approach." *Computers in Human Behavior* 92: 450–458.

Smith, G., and M. Michie. 2019. "Towards an Understanding of Indigenous Perspectives Through the Eyes of Pre-Service Science Education Students." *Learning Communities: International Journal of Learning in Social Contexts* 24: 22–39.

Smith, L. T. 1999. Decolonizing Methodologies: Indigenous Peoples and Research. London: Zed Books.

Smith, W. K., and M. W. Lewis. 2011. "Toward a Theory of Paradox: A Dynamic Equilibrium Model of Organizing." *Academy of Management Review* 36, no. 2: 381–403.

Spagnoletti, P., A. Resca, and G. Lee. 2015. "A Design Theory for Digital Platforms Supporting Online Communities: A Multiple Case Study." *Journal of Information Technology* 30, no. 4: 364–380.

Spiller, C., L. Erakovic, M. Henare, and E. Pio. 2011. "Relational Well-Being and Wealth: Māori Businesses and an Ethic of Care." *Journal of Business Ethics* 98: 153–169.

Stephens, J. P. 2021. "How the Show Goes On: Using the Aesthetic Experience of Collective Performance to Adapt While Coordinating." *Administrative Science Quarterly* 66, no. 1: 1–41.

Strauss, A., and J. Corbin. 1990. *Basics of Qualitative Research*. Thousand Oaks, CA: Sage Publications.

Stump, R. L., and W. Gong. 2017. "Social Networking Sites: An Exploration of the Effect of National Cultural Dimensions on Country Adoption Rates." *International Journal of Electronic Business* 13, no. 2–3: 117–142.

Tarafdar, M., C. L. Cooper, and J. F. Stich. 2019. "The Technostress Trifecta-Techno Eustress, Techno Distress and Design: Theoretical Directions and an Agenda for Research." *Information Systems Journal* 29, no. 1: 6–42.

Tempini, N. 2017. "Till Data Do Us Part: Understanding Data-Based Value Creation in Data-Intensive Infrastructures." *Information and Organization* 27, no. 4: 191–210.

Tim, Y., S. L. Pan, S. Bahri, and A. Fauzi. 2018. "Digitally Enabled Affordances for Community-Driven Environmental Movement in Rural Malaysia." *Information Systems Journal* 28, no. 1: 48–75.

Urzedo, D., M. Westerlaken, and J. Gabrys. 2023. "Digitalising Forest Landscape Restoration: A Social and Political Analysis of Emerging Technological Practices." *Environmental Politics* 32, no. 3: 485–510.

Van de Ven, A. H. 2011. "Building a European Community of Engaged Scholars." *European Management Review* 8, no. 4: 189–195.

Virtanen, P. K. 2015. "Indigenous Social Media Practices in Southwestern Amazonia." *AlterNative: An International Journal of Indigenous Peoples* 11, no. 4: 350–362.

Walsham, G. 1995. "Interpretive Case Studies in IS Research: Nature and Method." *European Journal of Information Systems* 4, no. 2: 74–81.

Wang, Y., G. Norcie, S. Komanduri, A. Acquisti, P. G. Leon, and L. F. Cranor. 2011. ""I Regretted the Minute I Pressed Share" a Qualitative Study of Regrets on Facebook." In *Proceedings of the Seventh Symposium on Usable Privacy and Security*, 1–16.

Wilson, A., B. L. Carlson, and A. Sciascia. 2017. "Reterritorialising Social Media: Indigenous People Rise Up." *Australasian Journal of Information Systems* 21: 1–4.

Wright, A. L., C. Gabel, M. Ballantyne, S. M. Jack, and O. Wahoush. 2019. "Using Two-Eyed Seeing in Research With Indigenous People: An Integrative Review." *International Journal of Qualitative Methods* 18: 1609406919869695.

Young, A. G. 2018. "Using ICT for Social Good: Cultural Identity Restoration Through Emancipatory Pedagogy." *Information Systems Journal* 28, no. 2: 340–358.

# Appendix 1 Exemplary Quotes and Codes

Value dimensions	2nd order concepts (non-economic value)	1st order (quotes)	2nd order concepts (goals)	Value outcomes
Social	Access eligible potential partners	'Guaranis only marry Guaranis, that is how the culture remains strong. When people start looking for partners, sometimes there are not many options in this community. Therefore, people engage with social media platforms to meet Guaranis from other reserves and, hopefully, get partners'. (Moon, Female)	Carry forward lineage	Value appropriation
Social	Socialising	'The digital platform that I use the most is WhatsApp. I love talking to my friends—indigenous and non-indigenous ones. Especially with the non-indigenous, I like sharing about different aspects of life. I think this is a powerful way for me to teach them about our way of living and to learn about theirs'. (Flower, Female)	Expanding world view	Value appropriation
Social	Sensitising	'There are all sorts of prejudices around us Some people think we are lazy, others think we are salvages, meaning we don't know how to behave or do things properly. By sharing our life in the reserve, we try to show them a little bit about us, about who we are, what we value, how we live and why we do certain things differently. Being different is not bad, is it?'. (Ocean, Male)	Fighting prejudice	Value creation
Environment and social	Raising awareness	'For example, we can use them to help us defend our culture and our territory—our land and nature in general. Through social media platforms, we can show the whole world that our culture is alive, we can show the importance of preserving nature, all these things that the world cannot see, cannot reflect about, what really happens in an indigenous settlement in reality'. (Owl, Male, FGD2)	Sustainability promotion	Value creation

Appendix 2

Coding Tree on Tensions and Information Flows

1st order (quotes and observations)	2nd order	Themes
'We are not lab rats, where people come, get what they want, and leave. We are not accepting people like these anymore. We want people who come, learn, but want to contribute to the community as well' (Lion, Male)	Exploitation	Tensions
'For young people, like me, our way of living changed a lot, mostly because of technology. We did not have such a thing when I was a child, I used to play in the forest with my siblings, bathe in the river, listen to stories from the elderly, and technology did not make any difference in the past. I have two daughters. Nowadays, they do all those things that I used to do when I was a child. However, I know that when they go to school, they will access technology and their way of thinking will change a bit because they will have other influences' (Sky, Female)	Detachment	
'The other day, a guy posted about an exotic bird he found in the forest during his trek. The next day, several people contacted us and requested a visit to see that bird. I am sure most of them were nice people who just wanted to see that natural beauty, but we never know' (Cloud, Male)	Exposure	
'We try to use these platforms as complements to books, notebooks, and the teachers' knowledge. For example, as an Arts teacher, I encourage them to look for videos on YouTube about Guarani body paintings and visual communication' (Sun, Male)	Inwards	Flows
'By sharing our life in the ketoa, we try to show them a little bit about us, about who we are, what we value, how we live and why we do certain things differently'. (Ocean, Male) 'Through social media platforms, we can show the whole world that our culture is alive, we can show the importance of preserving nature, all these things that the world cannot see, cannot reflect about, what really happens in an indigenous settlement in reality' (Owl, Male, FGD2)	Outwards	
'I think that digital platforms can make us lose connection with the people we love and care about, but they can also help. For example, their use enables us to get news from the relatives that live in other communities'. (Butterfly, Female, FGD 2). 'I think the most used digital platforms here in tekoa are TikTok, WhatsApp, YouTube, Facebook, and Instagram. Overall, people use them to have fun (e.g., watch videos) and to interact/communicate'. (Sky, Female)	Bidirectional	