



Taking different ways of knowing seriously: cross-cultural work as translations and multiplicity

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Abstract This article discusses the roles, challenges and opportunities of non-Indigenous academics working at the interface of Indigenous and non-Indigenous knowledges. Sustainability scientists have both questioned and advocated for cross-cultural research, and in this article we reflect on what working across different ways of knowing entails for non-Indigenous researchers at the professional, personal and epistemological level. Grounded on our experiences of on-going engagement with Indigenous communities, this article explores multiple pathways of taking Indigenous knowledges seriously while working in “Western” academic settings. In doing so, it highlights issues around the role and responsibility of non-Indigenous researchers in decolonising the (re)production of knowledges and the multiple contexts in which this can take place in sustainability science. It then deals with some of the challenges and ethical dilemmas we have encountered along the way, mainly with regards to issues of representation, translation in a broader sense, participation, and authority. Finally, this article discusses some of the epistemological consequences of engaging in such work, and

how despite being fraught with tensions and contradictions, it can help to foster spaces of plural co-existence.

Keywords Indigenous knowledges · Cross-cultural work · Translation · Multiplicity · Participation · Decolonisation

Introduction

Cross-cultural work on sustainability and development has been gaining increasing prominence. It has been both promoted as an important area of research as well as questioned on different grounds. In this article, we discuss the roles, challenges, and opportunities that non-Indigenous academics face when trying to navigate across Indigenous and non-Indigenous knowledges at the professional, personal, and epistemological levels. Sustainability science is a productive venue for engaging with these questions. Since the inception of this relatively new field of inquiry, sustainability science practitioners have sought to integrate plural approaches to knowledge production (Benessia et al. 2012). Combining qualitative and quantitative modes of inquiry, as well as incorporating government, non-governmental, private, and other stakeholder voices into its analysis, sustainability science embraces transdisciplinary frameworks to answer pressing questions about what sustainability means in the twenty-first century (Komiya and Takeuchi 2006). Sustainability science is also the product of a connection to, rather than a disconnect from, major national and international policy and programme initiatives centred on sustainability and sustainable development (Spagenberg 2011). This has resulted in an approach that is policy-oriented, where the outcomes of research projects are meant to have direct applications

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across different scales and contexts. Identified as a tool, a framework, and a practice, sustainability science is an approach with a wide net that holistically addresses complex socio-ecological and politico-economic questions.

In this article, we untangle our experiences as non-Indigenous researchers and the implications and challenges of trying to take Indigenous knowledges (IK) seriously within sustainability science. We agree with Benessia et al. (2012:75), who define sustainability science as “a tool for envisioning, planning and implementing radical changes in our collective being and agency”. Sustainability science has also been described as a field that promotes “collective, participatory action at multiple scales in targeted places within these polycentric systems” (van der Leeuw et al. 2012:117). We propose that sustainability science is ripe for engagements with decolonising methodologies, collaborative research practices, and participatory work. These engagements are especially important, as sustainability scientists are expected to work within and across many different communities. In these cases, researchers and research teams are likely to encounter multiple and plural epistemologies and ontologies, which should be approached with care and respect (see Spagenberg 2011). In fact, it is essential to question and move beyond Western understandings of peoples’ connections with natural (and supernatural) beings as universal and rather recognise and value Indigenous presence, rights, and ontologies. As Howitt and Suchet-Pearson (2003, 2006) suggest, it is necessary to engage with the “ontological pluralism” that already influences situated relations with, and the management of, the environment, in order to search for more equitable and sustainable forms of “plural co-existence”. By “plural co-existence”, Howitt and Suchet-Pearson (2003, 2006) point to a model of cross-cultural relations that acknowledges and respects Indigenous ontologies, or ways of being, and at the same time is attentive to the historical and current dominance of Eurocentric thinking within natural resource management. Drawing upon this notion of plural co-existence, in this article, we underscore its importance in the future of sustainability science.

We recognise that there are obstacles to moving sustainability science in new directions. van der Leeuw et al. (2012) point to several difficulties in this regard, including rigid academic institutions and a young and possibly fragmented field. Moreover, community and stakeholder participation can be “complicated by language, cultural differences, insufficient expertise and lack of empathy”, and researchers often have “little incentive to conduct participatory research” (van der Leeuw et al. 2012:118). To address the lack of empathy and lack of incentive to conduct participatory research, we throw into sharp relief ongoing challenges to sustainability science research, identify why sustainability scientists should contribute to

these difficult conversations, and emphasise the role of collaboration. This article also explores different avenues for taking IK seriously, based on our experiences of ongoing relations with Indigenous communities while also working within Western academic institutions. As non-Indigenous researchers, we outline some of these hurdles by addressing the landscape in which academic practice takes place both in the formal sense (teaching, research, and service) and in informal communities of support and practice (mentorship, friendships, networks, and alliances). Acknowledging the responsibility that non-Indigenous researchers have in decolonising knowledge, and the contexts in which this can be done, we examine some of the challenges and ethical dilemmas that we have encountered in our work. We focus on issues of representation, translation (in a broad sense), participation, and authority. We highlight that although these issues are not free of tensions, attending to the epistemological consequences of cross-cultural work can help foster the spaces of plural co-existence that Howitt and Suchet-Pearson (2003, 2006) advocate.

Taking Indigenous knowledges seriously

IK has been an important concept within the research on sustainability and development over the past several decades (Mauro and Hardison 2000). Alternatively identified as traditional ecological knowledge, traditional environmental knowledge, traditional Indigenous knowledge, traditional ecological knowledge and wisdom, and local knowledge, there is no one agreed upon way to talk about what we refer to here as IK (Hunn 1999). Moreover, top-down conceptualisations of IK often presuppose a uniform concept and situate knowledge as a noun, whereas for Indigenous peoples, “Indigenous Knowledge cannot be separated from the people who hold and practice it, nor can it be separated from the land/environment/Creation” (McGregor 2004:390). Berkes’ (1999) explanation of IK is the most often cited, emphasising a knowledge–practice–belief complex that governs proper human relationships with human and non-human worlds. In this sense, IK is embodied and lived, passed down through oral transmission from one generation to the next, gained by mimicry, observation, and experiential practice, shaped by dreams and other-worldly experiences, and learned through elder–youth apprenticeships (McGregor 2004). Such knowledge carries with it different rights, responsibilities, and moral codes, is adaptive over time, and is tied to spiritual and cosmological ways of being in the world (Cajete 2000).

IK became critical to natural resource management governance and practice in the 1980s and at the same time became increasingly part of sustainability science work.

The devolution and decentralisation of many environmental policies and laws worldwide paved the way for a shift to community-conservation partnerships, community-based research, and integrated conservation and development projects (ICDPs), which positioned IK as critical to the future of the world's biodiversity (Charnley and Poe 2007). Within the ecological sciences, a movement toward applied, participatory programmes and away from the equilibrium model of ecosystems has contributed to the development of interdisciplinary sciences that acknowledge the value of IK to conservation (Berkes 2004). These developments have taken place alongside parallel, localised, and transnational Indigenous social movements, where Indigenous and resource-dependent communities across the globe continue to fight for self-determination and self-governance, as well as the recognition of diverse ways of life (Niezen 2003; Cepek 2012).

As a result, IK has been a site of much discussion and debate—and operationalization—in natural resource management circles, conservation programmes, and sustainable development projects (Nadasdy 1999). Most science that includes IK is grounded in a “modern framework”, where certain Eurocentric epistemologies and research practices are carried out without leaving room, or space, for other epistemic dimensions of practice (Benessia et al. 2012). McGregor (2004) argues that the definitions of IK are worrying, since they are often imposed by international organisations, nation states, conservation groups, and federal ministries, rather than by Indigenous peoples. As McGregor (2004:390) suggests, these and other efforts to address IK raise difficult questions about authority, rights, and knowledge. On the other hand, it is also important to recognise the agency of Indigenous peoples, who, in different contexts and forms, have also appropriated and reworked IK to their own advantage (see, for instance, Laurie et al. 2005).

Within the context of sustainability science, Benessia et al. (2012) argue for a *praxis* that accommodates hybridised approaches and other ways of knowing, such as those presented by IK. By *praxis*, Benessia et al. (2012) refer to critical methodological stances that build on what Patti Lather (1986:257) identifies as a “democratized process of inquiry characterized by negotiation, reciprocity, empowerment—research as praxis”. Where Benessia et al. (2012:72) highlight *praxis* as critical to generating “radical changes” within sustainability science, Linda Tuhiwai Smith (1999) challenges Indigenous and non-Indigenous scholars to critically think about how and in what way *praxis* is enacted in fields of power. For Tuhiwai Smith (1999), “The spaces within the research domain through which Indigenous research can operate are small spaces on a shifting ground. Negotiating and transforming institutional practices and research frameworks is as significant as the carrying out of actual research programmes”. Tuhiwai

Smith's work has reverberated through many fields and institutions of higher education, asking scholars to consider their histories as well as their approaches to knowledge production, consumption, and distribution. Increased attention to, and scholarship about, decolonising practice began during a period of critical reflection in the social sciences which took place between the 1970s and 1990s in disciplines like anthropology and geography (Hodge and Lester 2006:42).

As a result, scholars from anthropology and geography have shown that many fields are grounded in positivist research programmes which produce violent encounters as participants are transformed into objects of study (Manathunga 2009:194). Quoting Bernstein (1992:8), Barnes and Sheppard (2010:194) explain, “Enlightenment philosophy [...] was based on finding a *single* (monist) principle that reconciled all difference, otherness, opposition, and contradiction”. In this way, research can share and did share similar characteristics with colonial or imperial projects (Haig-Brown 2003). Those working with Indigenous peoples and IK can objectify communities and misrepresent findings if they fail to carry out the research in a sensitive manner. As a result, some advocate that only Indigenous researchers should engage with IK, while others are more inclusive and suggest non-Indigenous and Indigenous collaborations (McGregor 2004). Feminist, Indigenous, participatory, and decolonising methodologies have responded to some of these concerns, advocating for a research practice that is attentive to the historical and ongoing political and economic realities of local peoples and the knowledge that sustains them (Elmhirst 2011).

Certainly, there are epistemological considerations as well as very real consequences of doing cross-cultural sustainability science research. While most researchers would agree that valuing IK is important for addressing local and global challenges, there is disagreement among them about what this now means in practice. Decolonising projects are still very much in progress, and as Tuhiwai Smith (1999) reminds us, there is still much work to be done. Therefore, given these suggestions, how do we move forward? We argue in this article that sustainability science has the capacity to foster spaces of plural co-existence across different ideological and material divides, in spite of some of the challenges ahead.

Discussion: navigating ethical and personal challenges

In this section, we reflexively consider our own experiences in this context. We retain the first person in each of these narratives to avoid an omniscient or impersonal third person voice. We hope that through opening up a dialogue

about our own struggles and practice, we can foster more conversations about Indigenous and non-Indigenous relationships in the practice of sustainability science, and the possibilities for future collaborations.

Case I: Marcela: why engage in cross-cultural work?

I have been involved in cross-cultural work for over a decade as a staff member of NGOs and state agencies and as a researcher, mainly working on issues around development and sustainability. In particular, my academic and professional experience included concerns about how communities engage in environmental management as a means for holistic wellbeing and self-determination. However, it was in 2004, working closely with Mapuche Pewenche communities in Alto Bío-Bío, Southern Chile, in a community eco-tourism initiative, that I became more aware of the complexities involved in cross-cultural relations. I became increasingly frustrated, as I felt that I lacked adequate analytical and practical tools to grasp these implications. This motivated me to enrol in a PhD programme, in which I tried to unpack these issues, and I have come back to those communities now, as a researcher. I thought that as a non-Indigenous woman, I had a responsibility to engage in cross-cultural work to address the inequalities and injustices that exist in a country like Chile, my home.

I believe that decolonisation is a process that should involve the whole society (Swadener and Mutua 2008). Actually, non-Indigenous people like me have a particular call to decolonise ourselves and enter into a “shared (cross-cultural) conversation”, as Indigenous people are actually much more familiar with the “Other” perspective (Jones and Jenkins 2008). But this shared conversation is not an unproblematic one, as it involves both recognising and challenging commonalities and differences to be fruitful and to acknowledge Indigenous particularities, or what distinguish them from non-Indigenous peoples, which are at the centre of most Indigenous struggles.

For me, doing cross-cultural research became, as Jones and Jenkins (2008) put it, a process of mutual learning “from”, rather than “about”, the Other. According to these authors, the difference is that the emphasis is not so much on the impossible task of fully understanding the Other, but rather on the complexity of Indigenous–dominant group relations. Learning “from” the Other, therefore, means experiencing difference, and it “allows the indigene–coloniser relationship to be interrogated in uneasy ways that insists on examining power and common sense, as well as the place of histories in the present. In its tensions is the fecundity of collaboration” (Jones and Jenkins 2008:483). Needless to say, this process involved transformations that

resulted from revising my own culture and position in the perpetuation or challenge of injustice and inequalities. Learning “from” the Other made even more evident our responsibility to expand the possibilities for plural, inclusive, and nurturing ways of co-existence (Frantz and Howitt 2010; Howitt et al. 2010).

Cross-cultural research, then, is crucial for undoing pre-existing hierarchies between Indigenous and non-Indigenous knowledge and searching for more equal relations. However, it also requires an awareness of the hegemony of Western epistemologies and its constant contestation. Doing so entails accepting and negotiating the complex relations of power that, although ever-changing, always shape relationships (De la Cadena and Starn 2007). This is even more relevant when considering how different knowledge, ontologies, and ways of relating to natural and supernatural beings are negotiated, privileged, or silenced.

Doing my PhD

When I embarked on my PhD research, I tried to conduct the research in culturally sensitive ways, promoting respect and including local concerns, protocols, and a high degree of negotiation with the participants (Howitt and Stevens 2005). Acknowledging the exploitative nature of most traditional Western research and academia’s (and geography’s) complicity in perpetuating colonial logics (Denzin and Lincoln 2008), I adopted a participatory and decolonising approach. However, some scholars have suggested that colonisation has been so influential in our own lives and minds that we can only aspire to do research “from an anti-oppressive and decolonising stance while realising the (im)possibilities and complexities of a truly decolonising endeavour” (Swadener and Mutua 2008:32). Thus, exploring and facing the many subtle ways in which I reproduced colonialist legacies, I became aware that adopting these decolonising and participatory approaches did not “fix me” or free me from arrogance or ethnocentric or paternalistic attitudes and practices (Smith 1999; Manzo and Brightbill 2007; Swadener and Mutua 2008:32). Therefore, following Smith (1999), two key questions remained: Whose research was it? And whom did it serve?

As I focused my research on an initiative in which I had previously been involved, and had contacts and friends within the communities, I assumed that I could be relatively realistic when preparing my research. Despite limitations in access to communication, I developed my proposal in consultation with some community members and partner organisations. However, I was also critical of the fact that the academic procedures and processes for obtaining funding and ethics approval from Aotearoa New Zealand meant that I had to produce a proposal with limited community input. Many aspects of the research in

conceptual and practical terms were left open to be negotiated with the communities. However, despite my previous knowledge and contacts, during the first meeting of my 6-month fieldwork, after being invited to go ahead with the research and discuss some of the protocols I should follow, it became evident that my expectations about how to conduct a “participatory research project” were quite naive. Despite the sincere interest and enthusiasm about the research among the communities, there were many constraints to their active and continued participation. First, people did not have much time to devote exclusively to the project. The leaders already had far too many responsibilities, there were various other projects and initiatives happening simultaneously, and people had to work hard to earn a living. Therefore, it became clear quite rapidly that it was very unlikely that they would be able to engage in activities arranged solely for the purpose of this research. Second, people wanted to be involved in different degrees, or participate at some stages more than others and in particular types of activities and discussions, due to the diversity of interests, roles, and abilities among the community members. Finally, there were very limited resources for organising meetings and activities involving people from different communities; this was particularly important due to the limited communication networks in the area.

Facing this situation, my idealistic ideas about the communities’ active participation and collaboration needed to be reassessed according to the communities’ resources, capabilities, and interests, to avoid putting extra burdens on them (Smith 1999). Thus, during the first meeting, it was decided that we would coordinate the research with other activities, instead of considering it as a separate activity. This proved to be a productive choice, as I could take part in, and directly support, the communities’ work, as well as include special discussions and activities linked to the research. It allowed the research to be closely linked to the concerns and everyday activities of the communities, and promoted discussions and reflections about “real” issues, tapping into their traditions of collective learning and dialogue.

After a while, and since I was already recording, taking notes, and roughly analysing many meetings, I was asked to formally summarise and present these discussions to support further debates. This turned out to be a very interesting methodological exercise, as it allowed for shared analysis and promoted interesting dialogues and insights. I was also asked to systematise the opinions of tourists who visited the communities and provide my own opinions on certain topics as an outsider myself.

Since many discussions were about what was being done, the research allowed for iterative cycles of action and reflection that resonated with Participatory Action

Research approaches (Cahill 2007), which affected the ways in which the communities worked, and some everyday activities and plans for the future were modified. These mainly involved concerns around self-representation, negotiating partnerships and enacting de facto autonomy and territorial control, and including Pewenche ontologies explicitly in environmental management. Therefore, although perhaps small and only a part of a much wider and complex set of interactions and processes, the research made a contribution to the communities by joining theory and practice, research and action, allowing direct links to their concerns and activities. At the end of my fieldwork, and in later visits, there were opportunities to discuss conclusions, incorporate feedback, and double check information and interpretations. From Aotearoa New Zealand, I sent some reports on the issues on which I was working, as well as some of the presentations that I did at different conferences and seminars. I was asked to translate material into English for the communities’ new website, and I regularly shared information that seemed to be interesting, such as funding opportunities and conferences.

Although the fieldwork was informed by participatory methodologies, I am critical of the level of participation that the research maintained during later stages. Due to physical distance, difficulties in communication, and the fact that I was mainly working in English, the analysis and writing were done with minimal involvement of the research participants. I tried to remain close to the knowledge generated in our collaboration during the fieldwork, maintaining a supportive stance to privilege the communities’ perspectives, but distance and time, the (increasingly theoretical) literature with which I engaged, and the very learning process that I underwent after completing the fieldwork meant that the way in which I looked at the knowledge and processes changed. Consequently, many ideas were transformed, others did not make it into the thesis at all, and some issues that did not seem so relevant at some point became central, all of which I determined by myself. Further complicated by university regulations stipulating that a thesis is a sole authored piece of work, I developed an increasingly ambivalent and conflicting opinion about the degree of participation in the end result.

Furthermore, once the fieldwork was over, although personal relations remained strong and fluid, often, when I would try to discuss some issues that had emerged from the research, share some new thoughts, or ask for the communities’ input (in person or via phone or e-mail), I would receive minimal response and interest. Slightly frustrated, I wondered why a project that had seemed so relevant while I was conducting the fieldwork no longer sparked the same level of engagement. In some conversations, I was told that although the project had been important, the current developments that I was pursuing were not so interesting to

the communities. I wondered if I had moved too far from the ideas that we had built together, or if I had become too removed from the real interests of those with whom I was conducting the research. I knew that the key elements were still there, and I believed that I was still trying to support the communities in their struggles, but I also knew that I had become more involved in academic debates and that I was framing my experiences with the communities in increasingly academic terms. But was that not what doing a thesis entailed? Was this also part of my own learning process? What would happen if I took “my” analysis to other unexpected areas? Was that not somehow expected from me as a PhD candidate? These questions brought me back repeatedly to the two key questions: Whose research was it? And whom did it serve? Although I still feel uneasy exploring these tensions which remain far from solved, in this paper, I suggest that they resonate with two aspects of trying to conduct participatory and decolonising research: understanding research as translation and participation as multiplicity.

Research as translation

For me, doing research, in many ways, turned out to be an exercise in translation. First, there was the evident, but no less tricky, issue of translating across languages. I did my PhD in Aotearoa New Zealand, reading and writing mostly in English, although Spanish is my first language, while also purposely engaging with literature in Spanish. In Alto Bío-Bío, most community members speak Spanish and Mapudungún, but very few speak English, which meant translating all the writings and presentations that I wanted to share, but never really being able to write or communicate in Mapudungún. When writing my thesis, I was aware that translation involves interpretation and inevitable distortions (Larkin et al. 2007); thus, when directly quoting participants, I included both the original version in Spanish and an English translation. This was an attempt to respect “the original words of the participants and ... not to further distance and decontextualize the words that they chose” (Cupples 2002), as well as to provide readers, who could read Spanish, with access to the original words.

In addition, there was the translation of orality to written text. This involved, on the one hand, facing the limitations of transcribing oral communication as a medium to communicate the emotions and context surrounding these words, and on the other hand, it involved the encounter of two different traditions and ontologies: the predominantly oral Mapuche culture, with its emphasis on storytelling, long conversations, and particular ways of sharing information, teaching, learning, and reaching collective decisions, and the mainly written Western (and, in this case, Anglo) academic culture, with its own codes, formalities,

and expectations of linearity. Finally, it involved translating my own “lived” and orally shared experiences to print on a page, or reducing “rich fullness to selected details in a written research paper” (Haig-Brown and Archibald 1996). Academic work involves specific kinds of analysis and ways of presenting results; thus, I had to “translate” what I experienced and learnt in the field into “acceptable” academic language and style. In order to communicate, “what it is like actually to *be* in place” (Gombay 2012, emphasis in original; Wright et al. 2014), and try to acknowledge the complexities and heterogeneity of the experiences and conversations that I had in Alto Bío-Bío, I privileged the use of stories, anecdotes, and long quotations. This enabled me to avoid dissecting too much of what was said, as well as to allow the readers to interpret it.

Finally, doing cross-cultural research that touched on sustainability, and in a topic that involved taking into account different ways of understanding and practicing the relationships between humans and natural and supernatural beings, there was a translation of, or at least a “conversation between”, different ontologies, or ways of knowing and being in the world. Although I included cultural protocols and values, and searched for local approval (Smith 1999), in fact, decolonising, participatory research becomes so by also respecting the legitimacy of others’ knowledges and ways of being (Howitt and Stevens 2005). It involves “valuing, reclaiming, and foregrounding indigenous voices and epistemologies” (Swadener and Mutua 2008:31), as well as unmasking the ways in which colonising tendencies create and support exclusionary discourses. Taking Mapuche Pewenche knowledges seriously in their own right, or enacting ontological pluralism, included challenging the ways in which these knowledges are often invisibilised, disregarded, or presented as irrelevant, for instance, when decisions are made about the processes and voices that are “allowed” in those conversations, the timeframes involved, and what kinds of actors (including non-humans) are seen as appropriate or not in environmental management. Thus, it involved engaging with a “*methodology of attending* underpinned by a relational ethics of care” (Wright et al. 2014).

In a way, these translations resonate with concerns around issues of representation. Alongside the flaws that I found in my own attempts to conduct participatory research, Pain (2004) notes that although one of the pillars of participatory research is the idea that participants self-represent themselves, rather than being represented by others, the latter tends to happen anyway in the “transfer” of knowledge from the context of the field to the academic context. I acknowledge that I had considerable power to decide how to represent the community members’ thoughts and words, and to choose what to include or exclude, and the number of direct words from the participants that ended

up in the thesis was small. This transfer of knowledge is also linked to the conceptual framework and literature that the researcher chooses. Using only Western theory limits the possibility of Indigenous “ways of seeing” to inform the conceptualisations and analysis (Hodge and Lester 2006). Therefore, I aimed to include the work of Mapuche intellectuals and activists who, in recent decades, have engaged in the decolonisation of knowledge, and who, according to Zapata (2006), occupy a marginal space within academic discussions in Chile and beyond. Further, I aimed to engage with the work of other Indigenous and Latin American authors, not only in terms of the ‘factual’ information they provide but also with their theoretical contributions. Therefore, I aimed to bring the work of Latin American authors into conversation with Anglo scholarly literature, which often run in parallel tracks. This is also important for developing a scholarship which is conscious of its own perspectives while embracing difference and for moving beyond the tendency to see the experiences and knowledge that come from the “Global South” as case studies for interpreting or affirming Western knowledge, while considering only the “Global North” as capable of generating theoretical and general geographical knowledge.

Participation as multiplicity

Coming back to the questions of whose research this was and whom it benefited, I admit that my answer remains an ambivalent one and that I am very critical of the level of participation that my PhD actually involved overall. However, although I am aware of the limitations of my research, it was still worth the effort. In a concrete, real situation, and as a young and relatively inexperienced researcher, constrained by deadlines, funding, distance, and the difficulties of working in a second language, the participants and I created ways to work and investigate together, and tried to enact more equal spaces and relations of co-existence. It is true that I had more control and influence over the final product of the thesis, but everybody involved in it took part from her/his own position and motivations.

Therefore, and not trying to be complacent, I have come to see participation as the intersection of a multiplicity of projects and paths at a particular time, more than completely sharing research interests. I embarked on the research motivated by my previous experience, the expectations of obtaining a higher degree and advancing my career, and a moral imperative to seek justice and equity. The community members invited me to conduct this research for several reasons that included their interest in strengthening their tourism initiative and internal organisation, and advancing their self-determination,

territorial control, and wellbeing. Thus, the participants were not interested in all the aspects involved in doing a PhD, just as I was not invested in the same way in their tourism initiative. However, this does not mean that we could not work, negotiate, and build something together. For a period of time, which somehow extends until today, our interests and willingness to work together overlapped, and although our interests remained multiple and disparate, they formed the basis for collaboration and mutual support. Despite its many deficiencies and limitations, it was still better to take this road and make this effort to collaborate, rather than not even trying. We all learned something and gained important experiences. Furthermore, we all became better equipped to continue our work and embark on new endeavours.

Participation does not erase uneven power relations; rather, it is “a situated mode of knowledge-power with its own limits and power effects” (Pain et al. 2007). Therefore, participation as a multiplicity of interests, timeframes, abilities, and so on, involves ongoing negotiation and requires honest communication, flexibility, and an awareness of the (sometimes subtle) workings of these power relations. How priorities are managed and the expectations of what each party is willing to, and can, contribute, as well as what each party aims to achieve from the process, must remain clear along the way, while also being open to modifications. Respect for each other’s rhythms and priorities, to avoid creating burdens, and understanding and dealing with the implications of our work also proved crucial. Thus, trying to work in an ethical and participatory fashion also requires considering critically and reflexively the processes and relationships in which we are involved, ongoing learning, and considering how our practices can be improved.

Therefore, particularly when working in a cross-cultural setting using a decolonising approach, examining whose research it is and who benefits from it remain the key. Building relationships that allow us to answer these two questions by pointing to the convergences and distinctions of a diversity of actors, agendas, and approaches is a way to honour difference while fostering inclusion, respect, and justice. This is especially the case when trying to engage and take seriously the different knowledge and ways of being among humans and more-than-humans, to expand spaces for plural co-existence.

Case II: Laura: why engage in cross-cultural work?

Fine-Dare and Rubenstein (2009) suggest that academic practice is situated at a particularly contentious, tense, and entangled borderland that crosses epistemological and ontological boundaries, geographical borders, linguistic markers, and embodied subjectivities. As academic

professionals, we are often taught to re-cast our identities into disciplinary and interdisciplinary specialties, often erasing our previous personal and professional worlds. Those scholars who work with Indigenous communities know that who you are as well as what you do is more muddled in practice, especially when it is interwoven with emancipatory politics, critical consciousness, and just futures (Lather 1986). Feminist political ecology approaches and decolonising research methodologies bring reflexivity into sharp focus as part of the research process, highlight the power-laden worlds in which the research is carried out, and point to possibilities for trans- and interdisciplinary research driven by shared goals for future sustainability (Denzin 2010).

When I met several Kayapó leaders in 2004, the relationships that I forged spurred a lifelong commitment to many returns. From that moment on, the Kayapó leaders with whom I have worked have challenged me to be a more attentive scholar, a critical scientist, and what Behar (1997) calls a more “vulnerable” practitioner. Kayapó peoples call themselves the *Mêbengokrê*, or people of the watery hole or watery place (Fisher 2003). As a federally recognised Indigenous group, the Kayapó peoples govern a homeland of more than 11 million hectares in the Brazilian Amazon (Zimmerman et al. 2001). Alongside the Cofán of Ecuador, Mapuche groups in Chile, and the Xavante in Brazil, Kayapó leaders have radicalised racial, ethnic, and territorial politics which they exercise through creative and often successful experimentation with collective action, community–conservation partnerships, alliance-building, and market experimentation (Graham 2005; Cepek 2012). The Kayapó peoples emplace these activities within locally relevant frames of meaning so that the practices, substances, ceremonies, and relationships that make Kayapó communities beautiful and whole endure. In this way, the Kayapó peoples have shown many different actors in the Amazon region that sustaining plural ontologies is not only critical for their wellbeing but also for Amazonian futures.

Bringing researcher–community–institutional relationships into focus in this section, I also consider the position of the researcher in collaborative work and his/her ability to create a “symmetrical dialogue” within research programs (Bishop 1994). In doing so, I draw upon several intellectual and participatory trends in crafting this project. “Shared anthropology” by Rouch (1991), collaborative research (Lassiter 2005), community-based participatory research, participatory action research, engaged anthropology (Low and Merry 2010), symmetrical anthropology (Latour 1993), and reciprocal anthropology (Fine-Dare and Rubenstein 2009) have been different ways of conceptualizing co-constructed research practices. As DeLyser and Sui (2013:6) explain, these types of approaches “...challenge hierarchies between research and researched and

equitably engage community research partners, to shatter monopolies of knowledge creation and possession, and validate all forms of knowledge and experience, and to unite research with action and community participation”.

Work with community members in one Kayapó village, Aukre, centred largely on the politics of place and the way in which Kayapó ontologies intersect with broader politics of territorialisation, neoliberal projects of capitalist development, and alternative, local economies for just futures. Kayapó livelihoods are inevitably entangled with global environmental governance regimes, neoliberal and neodevelopmental agendas, and the democratic, multicultural turn in Latin America. The Kayapó homeland, as many leaders told me, provides a space for communities to heal from the violent pacification efforts and provides a space for Kayapó peoples to carry out their lifeways well into the future. Yet many Kayapó with whom I spoke impressed upon me that this bounded, state-defined territory, although revered by conservationists as one of the largest, most biodiverse swaths of land in the Amazon region, and accepted by Kayapó communities as their new homeland, is partial in that it both serves to nourish communities as constrain them from other forms of place-making that are not tied to a defined territory. When I began this work, the scholarship emerging from political ecology provided frameworks for directly confronting these tensions between Indigenous conceptualisations of what is sustainable, just, and proper with respect to the mediation of the human and non-human worlds and those of conservationists or state officials (Robbins 2012). At the invitation of the leaders and villagers of Aukre, I began my doctoral work with the community, exploring the complexities of territorial governance in this context. The community members with whom I worked were supportive of this research, as they saw it as part of their goal to eradicate the false assumption that being Indigenous means that struggling for a homeland, engaging in conservation or development agendas, or participating in diverse economies, denied their “Indigenous” identity.

By noting my research centred on “place”, I refer not only to territorial politics but also to the many “places” of research. Larsen and Johnson (2012) elaborate as follows: “... Indigenous research takes place through encounter and relationships, both in the ordinary sense of ‘to happen’ and also in the metaphysical sense that knowledge requires an actively inhabited place for its disclosure and use”. I understood that I was a governed body, disciplined within Anglo-European traditions and fields of power (Deloria 1969) as I built relationships and partnerships with Kayapó community members. Inevitably, this research and subsequent research would be influenced by my positionality as a non-Indigenous woman scholar, who was an Italian American researcher. Since beginning this work, my

methodological approach also has been shaped by the affective dimension of practice, and the relationships that I have developed with participants, friends, and respected elders and youth over time. As Larsen and Johnson (2012) point out, the affective and relational aspect of research has been central to this work. The relationships forged during this process opened up spaces for dialogue about tender subjects: past violence, anxieties about food and family, and imagined possibilities for sustainable futures.

This reflection serves to highlight the different experiences that I have had as a non-Indigenous researcher and the way in which I have, along with esteemed friends and research participants, cultivated a programme of praxis. As a complement to the impetus of decolonising methodologies, critical ethnography, and feminist political ecological approaches, this approach echoes Hermes' (1998) suggestion that non-Indigenous and Indigenous research collaborations comprise a "situated response" and an emphasis on the researcher as learner and listener (Forsey 2010; Haig-Brown 2003). The communities with which I have worked and the scholars in this field have reinforced for me that the researcher–participant relationship is one marked by broader power relationships and institutional structures, and also one that demands a pathway to research that is interwoven with honour, respect, and care (Nicholls 2008). While other scholars, such as Bishop (1994), Gibbs (2001), and Manathunga (2009), have provided researchers with more concrete steps for Indigenous–non-Indigenous interactions, I agree with Hermes (1998) that the situational and transformative context of research belies a formalised prescription for practice. Here, I outline my own struggles in this process.

Doing my PhD

My introduction to the Kayapó community of Aukre was one that was initially mediated through a study abroad and a sustainable community development programme in the area that highlighted issues of conservation, development, and Indigenous rights as part of the fabric of the sustenance of community wellbeing. In this programme, Kayapó guides served as instructors, and students lived alongside and worked with community leaders in forested environments for a three-week period. This introduction to the community through a working sustainable development programme demonstrated the potential for conducting participatory research and carrying out projects in the area that would enable Kayapó interlocutors to be co-designers and co-participants in the projects. When I returned 2 years later to live in Aukre, I sought to work with the community to better understand how conservation initiatives and a federally demarcated territory provided new challenges and opportunities for Kayapó livelihoods.

At the time, I carried with me the theoretical and methodological practices in which I had been deeply involved back in Seattle, Washington (USA), where I was a graduate student at the University of Washington. Inspired by Linda Tuhiwai Smith's (1999) call for decolonising methodologies, Carol Zane Jolle's (2006) collaborative research, innovative community research publications and exhibits (Harrell et al. 2000), and participatory action work (Cahill 2007), I envisioned non-Indigenous and Indigenous collaborations from a political ecology frame that emphasised research as part of building relationships and shared experiences over time. In this way, Denzin's (2010) suggestion that research should take the form of a "dialogical inquiry rooted in concepts of care, and shared governance" resonates with the way that I, along with co-collaborators, were intertwined into the research fields of practice. With Aukre villagers, I sought to partner with community members to create relevant and meaningful research that would be beneficial to the community and potentially to the local, Indigenous NGO working in the area.

As a result, during the research, I sat in on many meetings held by companies, NGOs, health officials, and other visitors to their lands, to examine the variety of ongoing and proposed alliances, partnerships, and community projects in the area that were created for educational, health, and conservation purposes. As my research was also a "project" with the community, I held many meetings of my own to engage in a dialogue about the shape of the research process. These meetings were locally recognised and valued forums, but not everyone could always attend. I complemented this with ongoing consultations and conversations with the individuals with whom I had formed and sustained relationships. After initial and ongoing consultations with villagers, we decided that I would make community field guides that would list plant and animal resources in Kayapó, Portuguese, and English. These field guides would facilitate the political agendas of the community in retaining its federally demarcated territory by drawing attention to the biodiverse homeland and would also provide a reference for the Kayapó leaders to work with when they partnered with scientists to carry out different field programmes. While working on these books, I was requested to teach English to youth in the village, as international researchers were increasingly visiting the area, and I also employed local field assistants to aid with this project. Finally, a handicraft movement was alive in the community, and these art and ceremonial objects were playing an important role in the production of Indigenous and Kayapó identities and citizenship in post-authoritarian Brazil. Community members asked if I could facilitate the sale of certain handicrafts and, in so doing, draw attention to their story.

Collectively, these three projects defined the ways in which I began to initially partner with the community and

share a vision for future projects and products. At the same time, the long-term friends that I made during that period convinced me that one of the responsibilities that I now had was to share their stories of struggle and to make sure that I “got the story right”. Many people with whom I spoke, including one of my close Kayapó friends Marcos, stated that many “have written our story down wrong and think that we are forgetting how to be Kayapó. We have not forgotten our language and our traditions”. Marcos said that I now had a responsibility to share that story and “translate” what I had seen and known by being with the community to a larger English-speaking public. Well aware of the problems associated with speaking “for others”, I became increasingly concerned about the community members seeing the written portion of the project as my work, instead of a collaborative piece.

These conversations drew into focus different conceptualisations of shared or participatory research. Where participatory or collaborative academic work often means co-writing different types of published material, for the Kayapó, this was part of academic practice and not necessarily a shared product on which they wanted to collaborate at the time. Similar to Marcela’s experience, the community members, while supportive of the project, also had priorities of their own—whether it was providing for their family, attending political gatherings, or helping with festival preparations. Balancing a subsistence lifestyle, political events, ceremonial practices, wage work, and other activities, the collaborators and participants engaged with the project to the extent that their desires and time allowed. Many community members emplaced our relationship into affective and relational networks that ensued from this process, which carried with them specific roles and obligations for different daily and ceremonial activities. At the same time, ongoing conversations pointed to clearly defined community desires and goals with respect to the work, which involved different products, such as the field guides.

As requested, I worked with youth on English language and brought some handicrafts back with me and sold them. I also produced two separate field guides. I printed these out in the United States and sent them via mail for distribution, since I was not going to be back in the community for another year, and I wanted the village to have them as soon as possible. Upon my return, I learned that some had been lost in transit and distributed to community members unevenly. While these experiences were productive, they also left me feeling critical of the challenges of communication across geographic distance and about what collaborative research meant. I was constrained at the time by the funding available to facilitate travel to and from Brazil, limited avenues for ongoing and sustained communication when I was not there (for example, lack of Internet and telephone connection), and constraints in visiting due to the

procedures for obtaining permissions in Brazil. The process felt far from complete, and as a result, I started to rethink what it meant to do participatory, and sustainability science-oriented research as something that is not simply tethered to the research itself but is more of a process of multiple, interconnected affective encounters, relationships, actions, and results.

Research as translation

While these initial forays in our shared attempts at co-creating research products and experiences seemed somewhat unresolved, through the process, I began to develop a more expansive idea about participatory and community-engaged research. My experience is best encapsulated in what Wright et al. (2014) highlight as a “methodology of attending underpinned by a relational ethics of care” that “requires researchers to open themselves up to the reality of their connections with the world. And consider what it means to live as part of the world, rather than distinct from it”. This became a real possibility with the invitation of the director of the University Maryland study abroad programme, Dr. Janet Chernela. I became heavily involved in the course, returning to Aukre every summer to work alongside the community members acting as teachers and guides to the students. As with the initial course, this study abroad experience also served as a type of community-based tourism or sustainable development project for the community (Zanotti and Chernela 2008). The course generated revenue for the community by charging a community entrance fee per student, employing Kayapó villagers as teachers and guides, organising a handicraft market at the end of the course, and purchasing local food. However, the course was much more than a source of revenue. Through the place-based learning experiences, students and Kayapó leaders shared experiences and stories, what Overing and Passing (2000) define as “... to live together/to share the same life, and *convivencia*, a joint/shared life”. The leaders also told the students about their struggles and ways of viewing the world, fostering cross-cultural awareness about Indigenous ways of life and the struggles in the Amazon region.

Through my role as a student first, and then as a co-instructor and co-organiser in this course over the past 10 years, I see this endeavour as part of a longer-term programme in the area that is linked to, and inevitably part of, any research that develops out of collaborative efforts. Throughout this course, the co-instructors have nurtured a space of mutual dialogue, where students begin to examine past injustices and sustainable futures. These short-term “intimate but enduring” (Kaomea 2001) experiences have persisted, as the course has created a legacy of teaching students in international and Brazilian institutions of higher

education over the past decade. Here, translation does not necessarily take place in the formal spaces of the academy but in the in-between spaces of creating relationships, forging partnerships, and sharing experiences—or what Tuhiwai-Smith (1999) identifies as the “small spaces on a shifting ground” and what Howitt and Suchett-Pearson (2006) refer to as “co-constructed” relationships between “researchers and community-based collaborators”. In this way, translation becomes an experiential process, instead of just a textual one. Both, of course, are fraught and tense, with the heavy weight of colonial and power relationships built in, but this does not preclude meaningful interactions or transformative practice from taking place at multiple levels within shared research frameworks.

Research as multiplicity

“Really listening”, as Haig-Brown (2003) notes, is something extremely important for non-Indigenous and Indigenous research collaborations (also see Forsey 2010). As I continue to craft projects with the community, the team to which I belong has grown to include both Indigenous and non-Indigenous researchers. The ongoing work in the area has taken its own shape in two projects that have been built from earlier experiences, and continues to confront some of the limitations that initially constrained the participatory nature of the work. The first is a co-designed project that explores how film and media become sites for self-determination efforts and expressions of Indigenous pride and lifeworlds (Ginsburg 2008). In the second, we are partnering with villagers to understand adaptive strategies in the face of changing freshwater systems. With encroaching large-scale hydroelectric projects, climate change, and increasingly unpredictable resources, this type of participatory work is crucial for addressing sustainable futures in the face of both slow forms of violence and rapid environmental change (Nixon 2011). The villagers of Aukre are keenly aware of the shifting landscape around them and are seeking ways to produce research that is relevant to their wellbeing, helpful in the political realm, and work that also has the potential to contribute to multicultural educational programmes. These two projects, which are being carried out with local advisory teams and have the approval of the community leaders, will be the site of ongoing dialogues in Aukre. In this way, research becomes a process of sharing and addressing the complex world around us. As Benessia et al. (2012:76) note, the challenge is to “confront the more ambitious challenge of encouraging the emergence of new kinds of hybrid knowledge and practice—a synthesis beyond the individual parts—through extended participatory processes (Gallopín et al. 2001; Latour 1993).”

Yet I am still very much aware that the idea of doing research is inherently problematic, in that it is woven from

unequal power relations that have tended to privilege Eurocentric perspectives, in this case, on sustainability and development. The research process itself also tends toward establishing binaries between researchers, collaborators, and the landscapes which they call home. Instead of envisioning research as entering the “field” as “over there”, scholars working within feminist and decolonising paradigms consider research as a productive contact zone, along the lines of how Mary Louis Pratt (1991) uses the term, and a place for different material and ideological border crossings to occur (Fine-Dare and Rubenstein 2009; Larsen and Johnson 2012). Developing long-term relationships with different individuals in the communities with which you work enables these types of crossings. While this place, at times, may be a physical spot on the map, it also indexes metaphorical spaces that researchers and collaborators build through the research process. Finally, it also means that the research process also should facilitate raising awareness about different issues that the peoples with whom you work face and ways to educate a new cadre of professionals in respectful and reciprocal research (see also Hodge and Lester 2006). These projects should be restorative and healing, when appropriate and possible, and should seek to address injustice in all its various forms.

These experiences are, for me, in different ways, forceful reminders of the task with which sustainability scientists are charged, as well as those who take it upon themselves to confront “uncomfortable” knowledge and difficult scholarship (Rayner 2012). In my case, this involves simultaneously cross-pollinating research goals to address social and environmental justice, confronting anthropology’s past, and the legacies of other disciplines, that continually haunts the present, and designing collaborative projects. Of course, I recognise that I am not the first anthropologist to grapple with these things; in fact, it is quite common. As Low and Merry (2010) note, anthropology and engagement have arguably been hand-in-hand since the beginning of the discipline, and these types of reflections and relationships are typical of the field. While certainly there are still more stumbling blocks to overcome in considering Indigenous and non-Indigenous researcher relationships, the wisdom of other practitioners resonates with my experience of approaching projects humbly, really listening, creating meaningful projects which are relevant to the community members, and always carrying out work with respect and care.

Conclusions

Despite the flaws and difficulties (in practical and conceptual terms) that we both have personally experienced, as well as those identified in the literature, this article points

to participatory approaches in sustainability science that amplify the transdisciplinary mission of the field. Scholars in geography, anthropology, and science and technology studies show that science is “situated”, and scientific practice has historical linkages to colonial projects (Haraway 1988; Johnson and Larson 2013). The recognition of past and present dominant ontologies which are already prevalent in sustainability science is central to engagement with Indigenous nations, communities, and knowledges, and is a necessary starting point for collaborative or “co-constructed” praxis. “Decolonising” methodologies offer philosophical and practical suggestions for different ways to meaningfully work with Indigenous communities in this regard (Smith 1999; Kovach 2000).

On the ground, this means beginning with an “open negotiation between Indigenous people and research practitioners” (Johnson and Larson 2013) that moves toward a research practice that is transparent and participatory. “Participatory research” is a loaded term, and such research can be carried out in diverse ways, but what we emphasise here is a research design where all of the actors involved in the research process have a clear and informed understanding of the shape of the collaboration and its potential overlapping and multiple manifestations. We suggest a “flexible” and “fluid” research process in which constant communication is crucial. Within this context, we have also highlighted the affective aspect of researching alongside, with, and for Indigenous communities, and understanding researcher–participant relationships as one node of a larger knot of relations that cross communities, families, and academic practice. We highlighted the heterogeneous nature of communities and the importance of working with local advisors and leaders to identify problems or issues with the research process and design.

This requires researchers to work with local communities on professional and personal levels and carry out the research within a multidimensional, ethical landscape marked by care and sharing (Wright et al. 2014). While Wright et al. (2014:7) maintain that “putting such insights into practice remains difficult, particularly in the context of a still non-Indigenous academy”, it should not shy researchers away from creating new spaces for “ontological pluralism” within transdisciplinary contexts. Larsen and Johnson (2012:1) powerfully argue that “... people who participate in Indigenous research often find themselves ‘in between worlds,’ transformed irrevocably by the experience of having navigated across academic and Indigenous terrains”. Where many of these suggestions have been dominant in Indigenous studies and social science research, other disciplines may not be as familiar with strategies for building opportunities. In this case, we advocate for multi-person research teams that include local participants, community-collaborators, and researchers who can identify

pitfalls and work toward shared understandings of future practice. We agree with Beilin and Bohnet’s (2015) charge that we need to “conceptualise the local with a lens that integrates culture–production–place as integral within Nature, providing opportunities for a different view of what is possible”. We hope that this article will invite future sustainability science researchers to co-create hybrid, collaborative, or participatory spaces and also be attentive to the weighty material and symbolic consequences of their actions over time. This offers a different vision of what is possible in a dramatically changing world, where tackling issues of sustainability requires a different way of imagining our research worlds.

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