



An Aesthetic of Knowledge: Relations and the Documentation of Traditional Knowledge in Papua New Guinea

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Ownership of Knowledge

Beyond Intellectual Property

Edited by: Dagmar Schäfer, Annapurna Mamidipudi, Marius Buning

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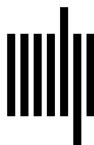
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AN AESTHETIC OF KNOWLEDGE: RELATIONS AND THE DOCUMENTATION OF TRADITIONAL KNOWLEDGE IN PAPUA NEW GUINEA

James Leach

INTRODUCTION: KNOWLEDGE FORMS, RELATIONALITY, AND AESTHETICS

The questions this chapter addresses revolve around how one retains the relationality of knowledge. Questions about relationality are of particular relevance when it comes to the subject of this chapter: *traditional knowledge* (TK), a form of knowledge that consistently poses epistemological as well as political and ethical challenges to modern, scientific, and academic understandings.¹ As we will see below, the term *TK* is itself problematic in various ways. But exploring the difficulties it poses in comparison to “modernist” ways of knowing will prove fruitful for understanding a relational kind of knowing that differs from how science or IP owns knowledge.²

The value and importance of traditional knowledge is widely acknowledged, as is its significance for cultural identity, sustainable ecological practices, medicinal and health-related uses, and uses in development, to name just a few. The terminology and definition are much debated—the World Intellectual Property Organization (WIPO) asserts that “traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge.”³ The UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, agreed in Paris on October 20, 2005, recognized “the importance of traditional knowledge as a source of intangible and material wealth, and in particular the knowledge systems of indigenous peoples, and its positive contribution to sustainable development, as well as the need for its adequate protection and promotion.”⁴ These statements, which speak of utility, economics, and fragility, point to anxiety over loss and to untapped value.

Whatever traditional knowledge is, allying traditional knowledge with development and wealth creation may be a good strategy to convey its importance to a skeptical audience that includes many who persist in considering indigenous peoples a throwback

to a lost past. However, an approach to traditional knowledge that echoes a colonial assimilation of resources to contribute to developing an economy addresses the problem of how to approach traditional knowledge in a depressingly familiar manner.⁵ This quotation illustrates that the problem of traditional knowledge lies not with the diverse ritual and practical activities of indigenous people, but with the narrow, usually instrumental, and often exploitative, rendition of indigenous knowledge by academics, development agencies, pharmaceutical companies, and so forth. There remain serious and unresolved questions, then, as to what the right way is to apprehend or engage with such knowledge.⁶

Consider the assumption that because traditional knowledge is “traditional,” it is inherently situated as a timeless and ancient lore. That is seldom true. Traditional knowledge is always contemporary with other forms of knowledge. The innovative nature of indigenous people’s practices is often misunderstood, as it seldom aims at developing the next product. Or consider the notion that traditional knowledge can apparently only be redeemed from its convoluted and complex expression—in stories, myths, and rituals—by comparison to, and assimilation with, the dominant knowledge forms of colonizers and developers.⁷

In response, this chapter is concerned with how one might think about and represent a knowledge form in which relations come first, where “knowledge” as an object in its own right, or as a truth claim, is not at issue so much as how people manage knowledge as a resource within, and for, referencing, establishing, or transforming relationships. I emphasize relationality because in the examples that I describe, relations are a central aspect, and they appear in ways that are unfamiliar in a modernist conception. *Relationality* refers to the form that knowledge takes, to what I am calling the *aesthetic* of its form.

To this end, the chapter describes how a particular group of people, “traditional knowledge holders” from the Rai Coast of Madang Province in Papua New Guinea (PNG), shape their social relations of knowledge ownership—that is, understand the value of the circulation and use of knowledge. Priority, secrecy, and license are all part of the picture, refracted through some assumptions in this region that are rather different from those that give rise to conceptions of the utility or economic exploitability of traditional knowledge. This is reflected in particular when it comes to considering the value, or the ownership, of this knowledge through intellectual property (IP) law.

Nowhere in the world is “outside” the purview of IP in the early twenty-first century. The promotion of IP as a means of protection feeds on fears about appropriation; it promotes state and bureaucratic control of resources that are imagined to be exploitable, while the mechanisms of appropriation and propertization that actually utilize

IP shape, and provide the context to, interactions within which traditional knowledge plays a part. This is as true for the area that I will draw on in this chapter as for anywhere else, whether or not people there understand or can leverage the legal process in any particular case.⁸ Yet IP has not, and does not, provide either the problem or the solution for a negotiation of what knowledge is, why it is valuable and to whom, and who has the power to control or benefit from its revelation and circulation.⁹ Rather than seeking to critique IP directly, or using it as a frame for analysis, in this chapter I follow through my assertion about the “relationality” of knowledge, in this instance to ask a different question that might be phrased as, “How can one own a relationship?”

The question of owning a relationship with reference to the material that follows arises in direct response to the two themes advanced by this volume’s conveners: What is knowable, and what is ownable? In light of both historic and contemporary ethnographies of the Rai Coast, approaching these questions involves a recognition that “knowledge,” as Rai Coast people understand it, requires some form of relation—both for it to be acquired, and for it to manifest. Relationships themselves are coveted, and what is “owned” about knowledge might be said to be the relationships it constitutes. Rai Coast objectifications of knowledge—of which documents, records, and writings are new examples—can be seen as more or less successful moments and experiments in forming or transforming relations. This casts a series of inflections on “knowledge” that shape the practice of documentation and require different approaches to circulation and protection than those framed by IP regimes.

This need for alternatives connects this specific discussion to a wide scholarship on diverse strategies for and interests in knowledge, informing our understanding of IP as a specific and historically situated practice.¹⁰ Influential work in the history of science has documented many examples of the relationships forged or necessitated *around* claims over knowledge, both before and outside of intellectual property regimes.¹¹ In this chapter, the emphasis is slightly different, as restriction is geared toward protecting access to the potential of relationships themselves, not to any knowledge “object.” Toon van Meijl has recently demonstrated “compellingly that scientific metaphors of knowledge are unhelpful for understanding indigenous knowledge practices. Māori ways of knowing cannot simply be collected.”¹²

In this chapter I use the term *aesthetics* to mean how something must appear in order to be recognized as a particular thing. So, for example, “mathematics” involves abstract numeration, or “a person” is a human animal with agreed moral, social, or legal status. Anthropologists have often described alternatives to these assumed forms, detailing conditions for recognizing personhood in different societies and pointing to the different criteria used to recognize combinations of agency, autonomy, origin,

and other factors,¹³ or indeed, describing different ways of counting or reckoning that can denote “mathematics” in certain spatial or kinship organizations.¹⁴ I draw on the anthropological practice of describing unfamiliar forms for things to illustrate the particularity of our own conceptions, and utilize this practice to interrogate something that scholars often take for granted: “knowledge.” This presents certain and specific challenges, including the resistance of pervasive “modernist” assumptions about what constitutes knowledge.¹⁵ I will come to this later in the chapter, where I contrast the modernist conception of knowledge as being reliant on nature as a register for effect with a Melanesian form of knowledge that is reliant on effecting or transforming relations to other people.

The main idea in using the term *aesthetics* is that the way that “knowledge” registers in different historically situated contexts is a percept as well as a concept, and that its form also implies particular forms of connection or disconnection to people and to things. These perceptions then become the basis for different forms of claiming ownership. One of this chapter’s aims is to establish the possibility of recognizing different kinds of knowledge aesthetics and to illustrate this idea by depicting a specific contrast between a contemporary Melanesian form and an anthropological, modernist-academic aesthetic of knowledge. This choice of comparison is consequent on the case study about traditional knowledge on the Rai Coast of Madang, PNG. I anticipate that the case study, and the comparison, will reveal more general principles about the connection of knowledge aesthetics and different forms of knowledge ownership.

The subject matter is a contemporary experiment to develop a documentation process for what the indigenous people from the Madang province call *kastom*. *Kastom* and its relationship to knowledge is an important concept in this story. Strathern and Hirsch offer the following useful definition of *kastom*:

The Tok Pisin (neo-Melanesian) concept of *kastom* [is one] by which people indicate what makes them distinctive. Whether or not it is appropriately translated as “tradition” is a moot point. *Kastom* refers to practices flowing across the generations which (like reproductive power) are to be found in habits, conduct and well-being definitive of the present; in Bolton’s words, *kastom* is not conserved but enacted, and may have a transactable or communicational value in relation to outsiders.¹⁶

The term *traditional knowledge* is a problematic phrase, especially when used as a synonym for *kastom*. In this essay, however, its use is a conscious choice. The choice arises directly from the impetus to associate the documentation project on which this chapter focuses with a wider interest in the field of traditional knowledge, indigenous knowledge (IK), and traditional ecological knowledge (TEK). Using traditional knowledge in the title of the documentation project, whether analytically appropriate or not,

links what Nekgini speakers are doing to a wider world with whom they can generate recognition and connection. Through the designation, they have already received some support. The analysis of this chapter illuminates that old category (TK) because it demonstrates the impossibility of the TK categorization pointing to something that can be simply “added” to other kinds of “knowledge.”

This analysis begins by turning to the early literature on the region that emphasizes the relationships in which knowledge figures. In the next section, I aim to show how relationships motivate action in which knowledge is manifest, and how knowledge takes the form of something that connects people. The ethnographic discussion that follows lays the ground for an outline of these recent experiments in the documentation of knowledge on the Rai Coast that highlight the relationality of both possession and appropriation and leads to a careful consideration of how different “aesthetics of knowledge” (i.e., what is recognized as knowledge, and how that is ownable) might be approached in ways that are “responsive” to its form. The conclusion then turns to what might best be described as methodology: how to engage—reflexively and ethically—in the production and exchange of knowledge in which relationships and ownership are always key components. Making knowledge unfamiliar in this way perhaps begs the question whether *knowledge* is an appropriate term at all, or if we need to understand practices of relational knowing within a wider conceptual framework of *kn/own/ables*—not only to conceptually grasp but also to responsibly practice an ethnographic project concerned with “traditional” ways of knowing such as *kastom*.

Other scholars have addressed questions of whether *knowledge* is an appropriate term in such contexts. Responding to a reader who thinks this kind of emphasis on knowledge is misguided in such small-scale Pacific societies, for instance, Lindstrom goes so far as to write, “Islanders know they live in information societies. They realize the power of talk. They recognize both the value and the danger of knowledge.”¹⁷ This chapter takes this observation seriously, while arguing that we must shift our concept of knowledge in order to respond to the issues of power and value that it raises.

KNOWLEDGE AND OWNERSHIP: COVETING RELATIONSHIPS

The most significant twentieth-century ethnographer of the Rai Coast, Peter Lawrence, concisely describes what he calls “the cosmic order.”¹⁸ Referring to the precolonial past as well as the time that he was writing in (the 1950s and 1960s) Lawrence emphasizes that all the processes and practices that shaped human life in the region were given to people by deities and ancestors. People’s relations to those entities were vital, as only those with a relationship to specific deities had important knowledge, and they

“accepted myths as the sole and unquestionable source of all important truth.”¹⁹ Sacred knowledge was paramount over everyday knowledge, and “the hard core of knowledge was the mastery of esoteric formula, only passed on during and after initiation.”²⁰ Lawrence opines that religion is essentially a “technology” for living on the Rai Coast. That is, “religion” was the source of all valuable knowledge. Religious activity consisted of managing one’s relations to ancestors and deities, and what those relations made possible. Without an equal distribution of knowledge—deities populated the area with different valuables and capacities; myths were distributed geographically, as were groups of people—the most valuable and significant possession anyone or any group could have were these myths and the knowledge they encoded. Therefore, “knowledge” of how to undertake the everyday and the ritual tasks necessary to life was a matter of such connections. Knowledge connected people to places, to deities, and to other people. “Rights to deities had to be established by genealogy or purchase. Otherwise they were invariably withheld from outsiders who, it was believed, would exploit them to their own advantage and so impoverish the original owners.”²¹ Characterizing Rai Coast thought with an “essential materialism and anthropocentrism,” Lawrence asserts that the relations people had with each other, and those they had with their deities and ancestors, were based on similar principles: “What counted was that each party to a relationship should be forced to ‘think on’ . . . the other by the fulfilment of specific obligations—as in kinship and exchange commitments.”²² Lawrence concludes that “where there was no exchange of goods and services, there could be no sense of relationship, mutual obligation and value.”²³

As a more recent ethnographer in this area, I can attest to the fact that there is a vast everyday, narrative, artistic, and esoteric knowledge on the Rai Coast. The things we think of as practical (gardening techniques, healing plants) and things we think of as esoteric or mythic (narratives about ancestral activities, modes of divination or magic) do not fall into these neat categories there, despite Lawrence’s mid-twentieth-century language of description. The practical—how to plant food crops in your garden, how to make them grow—are specified in the myths. What nurtures the main staple crops of taro and yam²⁴ are the spirits of the place, the ancestors, so looking after and attending to these is just as practical a matter as how the earth is prepared for the tubers. In fact, it is how the earth is prepared for tubers. It is not only the case that the “social” and “cultural” are always inherent in any practical activity in this way, they are also *the reason* for undertaking it. People do not grow food in a garden just to eat (subsist), as that would mean isolating themselves from the ongoing cycles of reciprocal work and exchange that result in finding potential marriage partners for their children, supporters in times of hunger, or protection from hostile others. Exchange makes the social principles of

interdependence and co-constitution explicit, and its elaboration is as “practical” as it is “religious.” Although Lawrence emphasizes certain distinctions between sacred and secular knowledge, and between pragmatism and materialism, it is clear that in this careful ethnographer’s summation, knowledge is both about and proof of, as well as dependent on, relations to specific other entities—be they deities or the people already in productive relations with those deities.

I turn now to my own more recent ethnography to provide a sense of how an act or process is turned into recognition—how Reite people demonstrate knowing and how they make a claim over the outcome. This involves using ethnographic examples to make three key points of analysis. These observations are, first, that knowledge is apparent in the effects it has on other people or spirits; second, that knowing something means performing it—that is, demonstrating the capacity to have the effect; and third, that these capacities connect people in specific relations of obligation. To know is to perform, and performance makes relations visible. This overview sets the scene for a discussion of the contemporary impetus toward making documents from knowledge and provides more ground for understanding how and why relationships in which knowledge plays a central role are coveted.

I refer here specifically to Reite, a collection of hamlets of Nekgini-speaking people located about ten kilometers inland of the Rai Coast. Nekgini is a small language group of around 1,500 individuals who live by horticulture and hunting in a rainforest environment. Reite people cultivate taro and yam, supplemented by native vegetables, and more recently introduced crops. Cash cropping in the area began in the 1970s and has been sporadically practiced. They had—and continue to have—a strong sense of their distinctiveness as people who consciously choose to live according to ancestral practices, their *kastom*. Their economic activities as a whole are geared toward processes of social reproduction. Gardening and cash cropping are channeled into kinship exchange cycles through which people marry, raise children, go through initiation, and attend to illness and death. The Rai Coast traditionally had no institutions of inherited hierarchy, wealth, or political authority. Thus, in every generation, people compete for influence, using their ability to gather supporters and obligate others to themselves, usually based on being able to produce or attract amounts of exchangeable wealth which is fed into reproductive, kin-based exchange cycles. Possessive individualism²⁵ does not characterize personhood in the area,²⁶ since people conceptualize themselves as both being comprised of and forming part of other people’s creative and generative efforts.

Pressure from an expanding population due to the availability of simple new technologies since the 1970s²⁷ has been exacerbated in the last fifteen years by the arrival of extractive industries—mining and logging—in what was, until then, a very isolated

region. The rainforest is being depleted at an alarming rate as a result of these recent internal and external forces. Reite is connected to the local urban center of Madang through marketing cash crops and through limited educational, employment, and healthcare possibilities. Most people there have both a sense of inevitable social change and a deep anxiety about how to maintain their autonomy and distinctiveness while benefiting from “development.”²⁸

Nekgini speakers plant taro and yam following the strict and often complex processes specified in their taro myth.²⁹ These include the use of various other plants, planting patterns, the order of crops, specific gender and kin roles for the gardeners and the taro plants themselves, and secret names, as well as tunes in which those names are sung. An important part of a garden’s gestation is what is known in Nekgini as the *wating*. Literally translated, *wating* is a “garden’s shoot” or “garden’s point of growth.” Taro grown within this special area encourages the other taro in the garden. The *wating* is specified in a key taro myth, and it in turn attracts the mythical mother of taro, who is cajoled or coerced into caring for this garden’s tubers at the explicit expense of other peoples’ gardens. Prior to harvest, the man who owns the garden will “block the road” to and from his garden by planting another series of plants in the same style, which keeps the taro mother from leaving until all the taro has been gathered. It is fair to say that Reite people are competitive in their gardening.

Each hamlet group, or those associated with it through descent or trade, has a different form of *wating* and different names and tunes used during the procedure. Thus, each place is associated with what Lawrence refers to as deities, either because they have a direct connection to the characters in a myth who had divulged a particular style of *wating*, or because this style has been passed on to them at the quintessential moment of (male) knowledge transfer during initiation.

In the context of my anthropological research, people often told me about the specificity of their style of *wating* and emphasized the limitations on its use. I quote at length here from one garden magician:

If someone else uses our style of *wating* we can charge them. We would ask, “Where did you get the knowledge to do this? It was not one of us who gave you this knowledge.” We will say this, but we will be thinking that someone must have given him the knowledge of it. The strength of each style is in the *paru* [secret name or spell] that accompanies it. To use a style the person must know what the spell is and what it refers to, and it is for this that we would charge someone we found using our particular style. He may say, “I just decorated my garden in this way, and now you want to charge me” [i.e., this is not fair/I didn’t use the *paru*]. But we would reply, “You are lying.” A man cannot make up such a thing in his own head, he must have got this knowledge from someone else, even though we never gave permission for this transfer. We would therefore charge him. Once he has paid us, he can use our style, and even pass it on to whichever sister’s son he chooses.³⁰

Some key characteristics of what can be known, and what can be owned, are apparent from this short description and statement. One is that knowledge is performative. People show knowledge by doing or making something. Another is that it is restricted to those who have a right, through kinship or payment, to use it. I say “use it,” as that is the crucial element. People who are aware of but do not use the form of a *wating* would not be seen to know.

Then there is what lies behind the appearance. Making a form appear in Nekgini action is a claim to, or a demonstration of, an underlying connection to power.³¹ In the case of charging for the appropriation of a *wating*, it is not the style itself that is the issue, but the fact that there is knowledge that gives the form power. This in turn has to have come from other people in the past, and it takes the form of a relation to a deity. Hence, having knowledge is always seen as being part of a relationship in which obligation and reciprocation are crucial.

The hamlets of Reite are grouped into clusters, reflecting local principles of social organization and kinship. In one such group of hamlets, a successful trade store was operated by a young, unmarried man during the 1990s. The store was attached to the house where he lived with other unmarried young men, as is the usual practice in the region. These “boys’ houses” are dwellings and are not the ritual homes of the Nekgini speakers’ male spirit cult. Cult houses—*passae*—are off-limits to noninitiates, whereas boys’ houses are not usually so. Yet suddenly, kinswomen were warned against visiting the trade store because of danger to their health from the proximity of the spirit cult in the house adjoining it. Now the presence of the male cult is a very public matter, albeit a matter of “consensual secrecy”³² as to its objects and methods. In this case though, everyone was confounded. When had the male cult arrived there? Who had constituted it? Why was its presence not apparent in any other ways? As it turned out, a young Reite man who had been traveling in another region of Papua New Guinea was staying in the storekeeper’s house. On his travels, he had become close to a certain group of islanders connected by language and *kastom* to other Rai Coast language groups who initiate their young men. This young man had participated in their initiation ritual. The surgical operation that forms the core element of this initiation had not been successful, so he had come home and the young men living in the storekeeper’s house had redone the surgery at his request. Talk of the presence of the spirit cult was, in reality, a euphemism for his seclusion while recovering from the operation.

Two major problems were immediately apparent. Despite the consequences—which we will come to in a moment—this young man’s maternal uncle was so incensed by these events that he complained vociferously in public. In doing so, he made it inevitable that the people who have the right to conduct this form of initiation on the Rai Coast would also hear about it. His public revelation turned what many had hoped

would remain a village-level complaint by the uncle over his nephew's initiation into an intervillage and interlanguage group dispute with potentially grave consequences for many people. Without overburdening the reader with context and detail, there are different forms of initiation on the Rai Coast, and certain villages and language groups have the right, either through revelation by a deity or through purchase, to perform the particular surgical operations in question. These initiation sequences are held to be powerful and dangerous, so they are jealously and fiercely guarded.³³ It is no exaggeration to say that Rai Coast people consider their misuse a matter of life and death. I used Gourlay's term *consensual secrecy* above, as it aptly conveys the fact that people choose not to know, or *choose not to perform*, things that they may well know *about*.

People know about other people's garden designs. They know about other people's initiations. But they do not use them, partly out of pride, partly out of fear of reprisals. As I have discussed at some length elsewhere, people will not even tell the narrative of a myth they do not own themselves, however many times they have heard others recount it.³⁴ *To act on knowledge is to claim inclusion in the relationships of its origin.* Such action is understood as future-oriented; that is, actions based on these powerful forms of knowledge generate and sustain relationships. As the economy there is geared toward the production of people—through labor flowing into kin-based exchange cycles—it is the recognition of relationships that defines a person's worth and wealth. This perhaps explains Lawrence's emphasis on pragmatism and materialism. Relationships are seen, they are made visible, in flows of wealth between people.

There is also a point to be made here about whether knowledge *as an object or thing in itself* is the matter at hand. The young man and his assistants did know what to do. It is not the knowledge in this sense that is at issue, but rather the validation of the performance. The man who appropriates a *wating* is accused of appropriating the relationship to the deity that is encapsulated by the connection between style, *paru*, and reference. The anger demonstrated by the uncle arose because it was his *right* to initiate this boy. He had *worked* to produce the opportunity to be named and paid to pass knowledge on in the context of an initiation sequence. When quizzed over why he had undertaken the initiation elsewhere, the young man complained about all the hard work involved in following the process at home.

So, this young man had made two thefts. He had stolen the opportunity his initiation provided from his mother's brothers, and he had stolen the right to perform a particular surgical operation from the owners of the initiation. *Work* is the cover-all term in Nekgini for anything that involves organizing elements and people to achieve growth or transformation in others' bodies. Knowledge, then, not only is a relationship but also resides in people's bodies *as capacities that have been given by others*. By

bypassing his uncle, this young man had short-circuited, as it were, the healthy and appropriate flow of exchange items and knowledge that amounts to a life substance moving between kin. Tony Crook, discussing knowledge forms in Bolivip, a village in the Star Mountains of PNG, writes that “‘knowledge’ appear[s] as an activity of the body, and a circulating, nurturant bodily substance.”³⁵

From this perspective, knowledge is owned as certain aspects of a person’s capacities in relation to others. Knowledge arises in places and is shared but not communal. What an individual knows is all about where they are from, and their capacities for action—from growing tubers successfully, to transforming youths into adults via initiations—all of which come from somewhere and someone else. This knowledge both connects and differentiates people. The economy is one in which people’s efforts are directed not toward subsistence but toward the production of food and wealth that forms part of kin-based exchange cycles. In their understanding, you grow others by feeding them—requiring knowledge—and you transform them at key life-cycle moments by sharing knowledge and capacities *for which you retain recognition*. Knowledge is effective in the way the social world is shaped and made to appear through practical everyday activity, including ritual and exchange. Knowledge is not apparent in its effect on nature, on something external to the human world,³⁶ but in its effects on other people, on their bodies and thoughts, on their capacities and orientations.

The aesthetic of knowledge here does not work with knowledge objects, with bits of information as discrete units, but with connection. Knowledge is performed as a relation and it requires a relation. It is fundamental to both parties. In this sense, knowledge *is* the relation. Knowledge is ownable just as a relationship is ownable.

DOCUMENTING REITE KASTOM

My association with Reite began in the early 1990s when I was enthusiastically welcomed there to undertake anthropological fieldwork.³⁷ The enthusiasm was indicative. They had their own reasons for engaging me. During negotiations around my arrival and presence, Reite people stated clearly in publicly staged events that I was being welcomed as a student who was trained to write about *kastom* and history. Reite people told me that they wanted their *kastom* written down for future generations, and as a means to achieve recognition from the wider world. Strathern and Hirsch’s definition of *kastom* cited above is helpful in comprehending this impetus.³⁸ They emphasize that *kastom* is not conserved but enacted, that it is “like reproductive power” and that it may “have communicational or transactable value.” *Kastom*: its value, ownership, and potential is at the heart of my relationship to people in Reite. It is—if not always explicitly—what we explore together.

The personal and self-referential aspect of what follows is thus not only an accident of my own personal involvement as an ethnographer. As will be shown below, it is a crucial consequence of engaging with *kastom* as a relational way of knowing. It has consequences for ethnography as a method. This began, for instance, with the fact that what I wanted to know in order to write a good ethnography—the way I saw myself fulfilling our agreement that I was there to document *kastom*—was not always what Reite people thought was relevant to tell me. Lindstrom puts it well: “The hidden task that any anthropologist faces—no matter what his or her research interest—is to figure out the rules and conditions that govern talking and access to knowledge in a society. Landing on an island and asking, ‘tell me about your economy and religion’ is not enough.”³⁹ Reite people clearly understood they were in a relationship with me involving knowledge. This brought my knowledge aesthetic into contact with theirs. In many instances, I was expected to *recognize* key myths and *respond* to their revelation. The information they offered was often partial. Investigations of genealogy always seemed to turn to demonstrations of connections to particular myths or stories rather than a comprehensive map of who was related to whom. What they thought was important to tell me followed from what they thought the purpose of the exercise was. A comprehensive sociological survey did not really figure in that purpose for them. None of this is surprising, as different expectations, hopes, and understandings are grist to the mill of anthropological endeavor. It was clear that they understood the relationship with me, and texts, as a potential vehicle for making Reite *kastom* into a form that might have more directly beneficial outcomes—be it practical or material for instance—than those they had previously achieved through outsiders (“white people”), where “white people” (*ol wetman*) is the local term used generally for all foreigners. My willingness to engage with this project was interpreted as evidence of a prior connection to them—it was assumed I was already related. This illustrates a particular cast on, and temporality for, knowledge according to their aesthetic. As Lawrence implies, there is no *new* knowledge.⁴⁰ Knowledge exists as particular relationships with particular others—deities and ancestors—and it always appears in the context of shaping or effecting other people’s responses, growth, or capacities. It follows that there are no *new* people.

Assumptions around knowledge and its value and ownership pervaded the enterprise of ethnographic fieldwork. For one thing, and in addition to the above material setting out some of the contours of a Reite “knowledge form,” the power of writing things down has been impressed on these people by all their contacts with powerful outsiders who do just that. Their question was, *what are the relationships that writing brings into being, or can produce?*⁴¹ Much of their desire for documentation has arisen in the context of their conviction of the power of their “knowledge,” and the perception that it has not been properly recognized.

THE AESTHETICS OF KNOWLEDGE AND THE PROBLEM OF MYTH

From the outset, explicitly to protect me from accusations of stealing or appropriating knowledge, Reite people decided that I would not be *given*—that is, I would not write down or even hear—the *paru*, the secret magical names that make procedures effective. They decided that it was important for me to record mythic narratives, but not mythic character's names. Likewise, I should record rituals in gardens and initiations, but the specific and very personal spoken formulae that activate the procedures were not revealed. In fact, fears of appropriation were always expressed as fears of the appropriation of *power*.

I want to draw attention here briefly to two aspects of different knowledge aesthetics, which relate to the form things must appear in if they are to be counted as knowledge. As I have made clear in this chapter, for Reite, that form is all about the connection between one thing and another, and about the specific relationships that make any action or process effective. Thus, it was considered acceptable to give me narratives of the origins of taro, as I could not exploit that knowledge without the associated *paru*.

I was not at all concerned by this decision. In fact, I was grateful for it, since it had been made to protect me from accusations of stealing knowledge—which were hovering in the background anyway. But at a deeper level, and without any intention of conveying petulance, magical names were not actually what I was there for. Techniques for how to plant a garden or the social and technical process of carving an artifact are much more easily translated into anthropological knowledge than esoteric formulae. Similarly, social organization, details about who exchanges what with whom, and other particulars provide the necessary sociological information from which to craft an ethnographic description. They look like knowledge—how to do things, what is done, what is believed, and so on—and are convertible into ethnography. I was faced with the problem that our different aesthetics of knowledge meant that Reite people were mainly concerned with magic.

This brings us to a stage in the argument where we might label magic as “relations to powerful others.” Their fear was not for the loss of an object—a name—but the appropriation of a relationship in which they would not benefit. As Lawrence notes, “Rights to deities . . . were invariably withheld from outsiders who . . . would exploit them to their own advantage.”⁴² Villagers do not share their relation to the taro goddess. Keeping her in your garden comes at the expense of someone else. Having knowledge is not the point—knowing how to activate the relationship is. And this brings us to a crucial distinction between a Reite aesthetic of knowledge and the more familiar academic aesthetic. We can accept the notion that knowledge is personal, but the idea that something practical and effective in one place might be ineffective

in another *because of who practices it* begins to challenge our sense of knowledge altogether.

This was brought home to me forcefully in thinking through a successful moment in our documentation endeavors, the publication of the coauthored book *Reite Plants*. This book was the result of a long collaboration between Reite elder Porer Nombo and myself. Porer approached me early on in my time in Reite and asked if I could make a book about the plants he used for healing and ritual to pass onto his grandchildren. This culminated in the publication by Australian National University Press of a color volume containing descriptions of more than one hundred plants and their uses. Happily, this publisher's policy is to enable free distribution of the text by PDF download, and there have been many downloads. Porer and Reite have received recognition—although no direct payment—and *Reite Plants* has stimulated other relationships, including those with funders and groups supporting the TK Reite Notebooks project described below.

Yet I, and some of the book's audience, perceived problems with its presentation⁴³—that is, with the aesthetic of knowledge into which our text was fitted. Papua New Guinean readers observed that there were no spells or magical formulae accompanying the text. I noticed that Porer's extensive knowledge of plants was arranged in the book in a way that made (partial) sense in his terms but would not make sense to most academic readers. Put simply, where the PNG readers found *too little* magic in the book, from the ethnobotany perspective it looks as if there is *too much* magic. Undertaking the exercise made me realize certain inadequacies in using the form of an ethnobotanical textbook to represent what Porer *knows* about plants. To summarize a complex problem, although it looks as if plants are the subject of a book that we published together, for Porer, plants do not work in isolation or without practitioners who know about their provenance and the ritual and magic that make them effective. Writing down what Porer knows *about plants* makes it appear that the plants can be isolated from people and processes. He uses plants based not on their chemical properties alone, but on mythic narratives, magical associations, and relations with spirits and ancestors. The title of a 1999 editorial in the leading scientific journal, *Nature*, demonstrates the point emphatically: "Caution: Traditional Knowledge. Principles of Merit Need to Be Spelt Out in Distinguishing Valuable Knowledge from Myth."⁴⁴

Reite Plants hovered between two different aesthetics of knowledge, and in a mirror image to the concerns of the editors of *Nature*, I became aware of the danger that traditional knowledge, in our rendering, may look like an inadequate version of science. Plants work, but do the practitioners really know why or how? The assumption I desperately want to avoid fostering is that use is a matter of "superstition and belief,"⁴⁵ and therefore that, for this knowledge to have *any value*, it must be stripped of its relational

and contextual factors. This is the crux of the *Nature* article: that knowledge must be distinguished from myth.

As we know, in many instances, indigenous and traditional knowledge holders are left in the position of providing clues that corporations and laboratories can follow up, to their advantage. That is, making the move from a piece of traditional knowledge to an intellectual property claim rarely benefits indigenous villagers such as Nekgini speakers.⁴⁶ Cori Hayden recounts that pharmaceutical companies actively avoid collecting plants from any place where they might have to acknowledge or share benefit with the original users.⁴⁷ In other words, an aesthetic of knowledge that isolates information from stories and myths has the potential to also isolate it from its holders. “Whether or not others appropriate that tradition *as* tradition (their own particular tradition, generalized national tradition) will depend on context. The reverse may be taken as even more problematic, that is, when tradition is *erased* in so far as what is being taken is being valued for quite different properties than those it originally encapsulated and thus not for connection to (anyone’s) ancestral values at all.”⁴⁸

In these circumstances we asked ourselves (Reite villagers and relevant others): What would it look like if knowledge of *kastom* were recorded, not according to an academic aesthetic of knowledge, but at a meeting point between academic and Nekgini?

A strong motivation for undertaking the experiment was the enthusiasm with which *Reite Plants* was greeted by other Papua New Guineans, even those who understood that something vital was missing. Many expressed a desire to produce a similar kind of record. Despite their fabled ubiquity in PNG, anthropologists are quite a rare resource, and not many have the skills or the time and inclination to undertake the painstaking process of ethnobotanical or biological documentation. We wondered whether it would be possible to devise a simple, cheap, and accessible system with which village-based people could make, and keep, their own records.

The idea of people making records for themselves, where they would control both the content and the circulation, also promised a potential solution for certain worries, including the fear that outsiders might exploit the content for their own gain. So, we began a process in which, again, the meaning, value, and form of knowledge was under investigation and negotiation. The TK Reite Notebooks project (TKRN), funded by the Christensen Fund, instigated an experiment into the codesign of a self-documentation process that was responsive to this context.

We began by drawing on an individual who had a specific set of skills and approaches that had already been introduced to a couple of Reite people. This was Giles Lane, a London-based artist from an arts organization called Proboscis,⁴⁹ which has developed a system for “public authoring.”⁵⁰ Porer Nombo and Pinbin Sisau met Giles and began

exploring his public authoring system during a visit to the British Museum in 2009.⁵¹ Public authoring is based on a paper-folding technique that allows commonly used paper formats to be hand-modified into self-binding booklets. These booklets require simple tools yet are designed to become hybrid entities existing both physically and digitally. PDF templates are created that are the basis for the booklets. When printed out, the sheets are cut and folded. The templates can be designed with, for example, different rubrics, questions, and information, and of course in different languages. They are then available for people to fill in any way they see fit—for instance, they choose the number of pages, any prompt or subheading, written or drawn records, and so on. More or less guidance or direction is available when designing specific templates. Once complete, the booklets can be unfolded and scanned, offering a potentially more durable digital copy of the original. Digital files can be printed and refolded to provide a facsimile. The scans can be stored, combined with others to generate a series or set, and shared through digital media formats if desired. Giles offered a way forward with his booklets, enhanced by his experience in working with people to design ways of using them, and we began what we thought of as an extended codesign process of the templates and a process with protocols for their use. This involved intense discussions around what templates for specific booklets that were designed to be useful to villagers would look like, and we had many public meetings in Reite villages to gauge interest, receive concerns, hear oppositions, and solicit advice.

The TKRN project was never conceived as outsiders helping villagers to preserve traditional knowledge. We approached the endeavor with the notion of an exchange and common exploration of what a Reite documentation of their *kastom* could look like. Whatever the process and outcomes, these were always going to be about more or less well-comprehended—on both sides—meeting points. As I now describe some of what happened during our engagements, it is important to keep in mind that this was approached as a common project and, necessarily, as an exchange. That meant each side offering what they had, while thinking about how that might be made responsive to other possibilities.

From the outset, we recognized the importance of embedding clear and unambiguous information about the project, its aims as well as its limits, and thus conscious and informed agreement by participants. I will use the term *authors* to designate these participants, even though “authorship”—as I come to below—is not an entirely adequate category here. Author-participants are asked to confirm on the front cover that they have understood that TKRN is providing materials with which they can, if they so choose, make a personal document about something. They are asked to indicate the scope of sharing for the particular booklet that is being produced. The options range from being completely private to having them scanned and returned to them as a

digital copy, to various other restrictions on circulation—for instance, limited to just family, village, women, or men. Each time we worked with a different group of people, there were further articulations of what people might be concerned about, and what control they would like to exercise over the documents they produce. These discussions have led to evolving iterations and have been an important mode of engagement with the idea of documenting *kastom* in the first place. Though far from perfect, the requirement to consider circulation ensures that participants are definitely made aware of the possibility of appropriation and, in response, the potential for absolute control—and, indeed, the totally voluntary nature of using the templates.

We came to call this method *engaged consent*. In contrast to the procedures that I had to follow in my universities for this project to go ahead—gaining permission from ethics committees, guaranteeing ascertaining the participants' free, prior, and informed consent—our form of engaged consent is not simply a signing off that allows me or other researchers to use *their data*. It is instead a moment where a booklet's writer considers their intentions and interest in the outcome. The emphasis is firmly on articulating the wishes of those filling in the booklets, rather than on asking them to agree to an already established framework that absolves the documenter of responsibility. It also makes the writer the *author* of their version of what is produced.

Alongside this engaged consent section on the front cover of each booklet is a space for a photograph of the writer and their name, place, date, and booklet title, if they choose to give one. The photograph helps to make evident a personal connection. By attaching the photographs—in most instances, immediately—and maintaining the digitized records as facsimiles, the process keeps writers in view. Whatever they choose to record appears in their own handwriting,⁵² and in a booklet that was handmade by them. Obviously, it is never able to fully address the complex interleaving of knowledge and person, but this format does make a move in that direction. In addition, Giles and I worked with many Reite people to phrase prompts, questions, or guidance notes for the use of the booklets, placing a strong emphasis on recording from whom the story or process came and where it originated. We also reminded writers of the importance of recording only things that would not cause disputes. We then tried to find appropriate analogies with local protocols in which knowledge is passed on in particular relationships.

For those people who choose to do so, it is possible to make the scanned files of their booklets widely available through digital channels. There is no encouragement to do this in the method or protocol itself. Somewhat to my surprise, Reite people have collectively agreed, after repeated discussion and questioning, that their booklets should be made freely accessible online. There is now a simple website on which they post their booklets.⁵³ It is true that, once these stories and practices are in the public domain,

anybody can use, mix, remix, or otherwise appropriate them. As we will come to below, Reite people have devised their own system for managing this risk on their own terms.

The fact that people independently decide on the topic and scope of their documents makes for some interesting outcomes, and discussions. Many people recorded similar things. Taro and yam figure prominently, for example, with levels of detail ranging from complex and intricate to very minimal, and differently phrased accounts of taro and its origins, gardening techniques, and so forth. Rather than being concerned about repetition or duplication, we realized that these individual records allow for a diversity of representation on any one topic, and for different aspects of the same thing to be recorded. Although this was unplanned, it also mitigates the emergence of overly canonical or authoritative versions that come under the control of one generation or group and reflects the multiple connections and types of relationship that constitute knowledge, since it also makes it possible for younger people to document *kastom*. No one has made any complaint about these duplications or different versions. Thus, each booklet is just one actualization that, in fact, is only part of an actualization anyway. Writing things down does amount to a kind of fixing, but it does not guarantee that any reader is necessarily going to practice it in that same way.

Some absolutely beautiful documents are being produced. Many are detailed, careful, and superbly artistic. The spontaneous introduction of beautiful drawings into many of the booklets is significant. Of course, artistry is a key aspect of any process involving knowledge in Reite, as aesthetic effect is crucial. As I have emphasized, knowledge is a relation to or manifestation of a particular kind of power here.

Most, if not all booklets—however carefully produced—are incomplete in some way. Booklets are more often than not *indicative* of a story or process rather than a complete rendering of it. Several people have approached me to evaluate the booklets they had produced, and several have also asked if they were *complete*, clearly displaying an understanding that the form they are content with and those they imagine I require are different. Yet, even those people who display a clear understanding of this disparity and are the most vocal advocates of the booklet project have not used it to make a comprehensive record of knowledge that is in danger of being “lost.” Most records are of things that are quite well known. There has been no systematic effort to use them to record the knowledge of frail old people, for example, nor, seemingly, to prioritize rare esoteric knowledge. Perhaps this reflects the fact that there is *no sense of an existential need to document knowledge as such*. The desire for documentation does not come from the same aesthetic of knowledge as that of the academy.

As Crook argues, the existential need to document knowledge arises from a different aesthetic, one in which there are objects or units of information that will disappear if not transmitted or recorded.⁵⁴ The immediate lesson to be learned from this is

that knowledge is operating in a different manner, where performance and enactment is key. Reite people are performing versions for each other and to each other. So, the documentation is about capacity and relationality, not a catalog of objects that, lined up together, could ever be called encyclopedic or comprehensive.

Although—or perhaps because—the booklet form was intended as a way of facilitating Reite documentation processes for their own ends, it has been revealing to see how closely I am implicated in their production. People did not engage in making booklets unless I was physically there in the village. In some ways, this confirmed that documentation is tied into expectations and interest in a relationship with me. More widely, that knowledge and its performance require a relationship to motivate action. Questions that concerned Reite people about the form and content have been more about an aesthetic of effectiveness in these terms than about completeness or coverage per se. And even more interestingly, incompleteness was absolutely deliberate in many cases, and explicitly motivated. As Annelise Riles observes while discussing the modern ubiquity of documents as forms of knowledge, “There is nothing inherently passive or automatic about actors’ responses to documents. . . . The agency of the form and the form-filler are not neatly circumscribed.”⁵⁵

VALUE AND CIRCULATION

Some Reite people remain suspicious of the whole endeavor, maintaining a narrative of external benefit, which would be realized by me, and possibly my local supporters. The tactic of giving people control over content and circulation was only partially successful. In trying to take myself out of the frame, as it were, as author, steward, or beneficiary, I might have been wholly missing the point. Hence, we are still struggling at the meeting point between knowledge aesthetics. For example, some younger Reite people have noticed that they have to pay for data on their mobile phones, and they associate the charge for data with a charge for access to the booklets. They are correct, of course. While university academics in wealthy countries are used to assuming that access to information is free, in reality it is not. The fact that the income from selling data does not come to me, or anyone associated with the booklets, is both true and, in a sense, irrelevant. Someone is benefiting from their knowledge and making a gain in which they are not included. I am constantly reminded that documenting knowledge *for its own value* is not part of the aesthetic here.

This brings us to a question that was discussed at length in Reite, and that I have been asked much more forcefully by academics and activists in various public presentations in the United States and in Europe. Is it not naïve to make traditional knowledge available online? Surely this will make it far too easy to appropriate? The answer to

this is multilayered. For one, controls on circulation of the booklets' content were both formal—the embedded definition of how public the writer wanted them to be—and, more importantly, informal. That is, Reite people instinctively use the booklets to provide information about a process or myth but omit the esoteric or secret aspects necessary for the process to have any effect. They leave things out. Those words are of no practical use or interest to outsiders, but they are the key element for Reite. Of course, one point that tallies with my argument so far is that *paru could not be* embedded in the notebooks because *they require specific transmission*. Taboos and restrictions are personal and specific, and the transfer of power relies on an ongoing relationship of obligation to the donor.

Like the Papua New Guineans who perceived that something was missing in *Reite Plants*, we might ask, What use is the documentation if the key aspects are excluded? There was a clear answer to this from writers in Reite, who explained that the value is in creating a new potential route to sustain their *kastom*. This can be realized locally when children, nephews and nieces, and grandchildren are engaged with their elders in making the booklets. They are a new and intriguing context for transmission and exchange. Or the potential may be regional for them. If the booklets are made public, other Papua New Guineans will see and be stimulated to engage with Reite in exchanges and relations around *kastom*. The booklets demonstrate Reite people's expertise. They are seen as a stimulus for transmission that involves a personal relationship with the knowledge holder. It is here that the booklets take their inspiration, in terms of process, from Reite protocols. They are there as a reason for further relationship making. For this they need to be available, to circulate. Reite people have knowledge of their own knowledge in the sense of knowing the purpose and process of what they do and observing its effects and whether these meet the ethical and practical purposes for which they exist. Knowledge becomes an exchange item or boundary object between them and others.

The issue for Reite people is not that other people might copy their booklets or their stories, but that other people might utilize them for some purpose that brings a benefit from which they are excluded. Their solution is to make available some things that they are happy to see act as a link to others, things that will draw others into a relationship with them. What they choose to circulate is knowledge, acting in a different way from its practical application in everyday life. In the booklets, knowledge takes a form in which a different value can be realized. So, rather than stop people from copying or circulating the booklets, many individuals have adopted a different strategy altogether: encouraging people to print out and view the booklets. In return, they assume that they will achieve recognition.

Reite people's obvious inability to pursue IP claims against any appropriators is part of the inequality of global capitalism. Sillitoe argues that "the idea that IPRs [intellectual

property rights] offer some kind of general protection to local science by assigning rights and excluding others, should not be misconstrued as protecting knowledge from extinction under the relentless onslaught of the economic and social forces of capitalism. Regarding IPRs as a solution to the protection of local knowledge is thus to misdiagnose the problem.”⁵⁶ IPRs require states to enforce them, and, as Antons explains in his summary of a lot of earlier work, this tends to put local practices into the frame of knowledge as an economic resource, where techniques, designs, and even plants come to be controlled by urban elites and bureaucracies.⁵⁷ The registration of IP in traditional knowledge misconstrues—one might argue, willfully misconstrues—both the forms of knowledge and the ownership practices of traditional knowledge holders.⁵⁸ Antons, for example, cautions strongly against the move from perceiving local traditional knowledge as forms of cultural heritage to determining them as intellectual property.⁵⁹ In this he echoes Hirsch and Strathern.⁶⁰ While WIPO’s 2016 statement on the value of traditional knowledge—as “dynamic and evolving”—moves toward a more accurate recognition than their previous renderings, its language inexorably draws attention to “innovation” and “scientific value” and inevitably points toward the potentially propertizable aspects of traditional knowledge.⁶¹

The TK Reite Notebooks project is opening up different possibilities and forcing us to think about appropriation in its relationality, rather than as an act in and of itself. We have designed the booklets to retain as much context—that is, connection and relationality—as possible. Yet, the Reite documenters were way ahead of us in this regard. There *is* information in the booklets, and context is there in terms of the potential to identify and trace the source of a practice or story. But inevitably, the booklet is not the knowledge in a text, but a potential for other relationships. The actual relations that connect these things to the real world have to be lived; this is a different kind of knowledge that means something different to different readers. What Reite people record is there to remind them and their children of the particular kinds of stories, practices, ceremonies, designs, and relations to history that they will be able to embody as practice. People who are not there can only really view it as a representation of something. They can behold it, not practice it. While clearly not following the logic of intellectual property, the documents are *also* an *a priori* claim, a mark of knowledge and understanding.

What, then, does making something available do in this case? These Papua New Guinean villagers understand the potential of knowledge to create relationships. For that to be possible, knowledge is attached to people in ways that recast vulnerability through revealing and hiding aspects of itself. They shift attention away from knowledge *objects* toward the relationships involved or created by transmission.

APPROPRIATE DOCUMENTATION?

Eugene Hunn advocates that we should “write” ethnobiological anthropology in a way that allows a wide audience to “appreciate traditional ecological knowledge.”⁶² He argues that a level of expertise on the part of the ethnographer is an important starting point. Translating “their” “cultural knowledge”⁶³ of “the natural world”⁶⁴ requires a strong understanding of that natural world on the part of the translator. Hunn says that a skilled and knowledgeable ethnobiologist has the opportunity to meet indigenous people with enough understanding for a mutually interesting exchange. This exchange has the potential to represent the wonders of the natural world *and* the deep and important understandings of traditional knowledge holders. His model example is the much-admired collaborative work of Saem Majnep and Ralph Bulmer. Majnep was from the Kaironk valley in the Schraeder mountain range in Papua New Guinea, and Bulmer was an anthropologist and expert botanist and ornithologist. Their classic coauthored book *Birds of My Kalam Country* laces Majnep’s descriptions of flora and fauna with contextualizing descriptions containing Latin names and scientific identifications where possible, alongside botanical and ornithological commentary from Bulmer.⁶⁵ Hunn cites this as an example of “expert meets expert,” where their common ground—the natural world and a close and technical appreciation of it—provided the opportunity to create a compelling text that “writes culture” in a way that transcends the concerns over reflexivity or master narratives that have plagued social and cultural anthropologists since the end of the last century.⁶⁶

While I can only agree with him on the value of traditional knowledge, and of course on the centrality of the classic—and brilliant—work of Majnep and Bulmer, I believe that Hunn’s position does not take account of the times when a traditional knowledge holder’s expertise is phrased in ways that confound scientific expertise—or, even worse, that seem to be at odds with scientific understandings and explanations. Take one example of many: pages 38 to 40 of *Birds of My Kalam Country* describe a healing ritual undertaken by Majnep’s forebears. In this, pigs are sacrificed, and the patient is rubbed with slimy substances from specific plants and vines “to make the sick person’s skin all slippery, so that the sickness cannot get a hold on him.”⁶⁷ Other leaves and plants are used that “drive out the sickness and the evil that is causing it” before the whole group collectively plants cordyline shrubs: “With the planting of the cordylines the sorcery that has been causing sickness is planted also. They are a sign that everything is now straight with this group, for planting them causes all the *kawnan* (‘souls’ or ‘shadows’) of the members of the group to return and stay safely at that place.”⁶⁸

I have quoted only certain points here to draw attention to Majnep’s emphasis on what we might term magic, and to the explanation of the use of certain plants through this narrative route.

Annelise Riles takes a different approach to Hunn, but one within the same ethos: the engagement and mutual recognition between anthropologists and those among whom they work. She calls for a focus on “ethnographic response”⁶⁹ in a time when anthropologists can no longer imagine that they will find culture or knowledge as objects out there in the world to be discovered.⁷⁰ Riles asserts, “If anthropologists ever believed that facts were there to be ‘collected’ in the ‘field’ rather than produced collaboratively in the ethnographic encounter, they have abandoned any such pretense.”⁷¹ In a striking parallel to Hunn—striking because of their different starting points—she describes the “mutual empathy”⁷² necessary for successful ethnographic exchanges. Riles considers this to involve an explicit tolerance of the different aesthetics that apply to knowledge, and a willingness to try and accommodate or imagine that they may be talking about very different things, even if using the same language(s).

I have already drawn on Crook’s argument about knowledge in Bolivip, PNG. He proposes that in any knowledge exchange there, it is a social relation that is at issue, and not any object of knowing. Crook argues that this has created a huge challenge for anthropologists to comprehend: “Part of the trouble is having all-too-familiar metaphors of knowledge falling easily to hand. . . . For example, knowledge is perceived in building-block-like ‘domains’ . . . lined up.”⁷³ He makes a strong critique of anthropology itself for always assuming there is *something* to be discovered or uncovered, an elusive and evasive core to other people’s lives, which *looks like something we call knowledge*. Something, indeed, that can be discovered, cataloged, and documented as key pieces of information found ready-made “out there” in the field—in other words, the “knowledge objects” that make up a culture.

Instead, Crook focuses on a series of relationships in which people transact care for understanding; “these exchanges involving knowledge would be understood as the mutual support of persons who become encompassed together as if they were one person.”⁷⁴ According to this, what looks to an outsider like “secrecy”⁷⁵ and the constant loss of bits of knowledge as generations pass away are in fact nothing like secrets at all. The value placed on knowledge in Bolivip, and the shifting restrictions on its circulation, are dependent on the relational power of knowledge that flows between people, helping to constitute their bodies and persons at key moments. Each Bolivip statement or performance is anchored in an approach to knowing that makes relations between things and people the focus and object of effort, not the discovery or transmission of any item of information. Crook writes that, by undertaking field research in Bolivip, “knowledge implicates the anthropologist and involves their person! Important knowledge here is not knowledge information or data, but a form constitutive of persons which draws upon the bodily resources and substances of one to grow and bolster the other.”⁷⁶

In his recent book detailing complex and extraordinary environmental and social adaptation in the societies of the Massim—a region consisting of the islands that lie to the east of the PNG mainland—Fred Damon makes analogous observations.⁷⁷ He vividly demonstrates the impossibility of approaching knowledge as a series of fixed points. His attention to local variations, and to the different information received over an extended enquiry, offers a picture of a variegated and adaptive socio-ecological practice in which what is true in one place and for one person is *not true* in another. He asserts that even though the chapters in his book record in detail what people know, they do not provide a coherent set of things that are known. Again, despite the information on plants, planting, and the effects of plants and soils on each other, none of the knowledge captured there will be effective outside the particularity of its situation. So, anyone looking for a simple formula that could be applied to managing such environments will be disappointed; but that is the point. By revealing partiality, distribution, contrast, and alternatives, Damon is eventually able to describe two things clearly: details of the variable practices, trees, ecology, landscape management, and other things, *and* the overall shape of a knowledge system—which is also a social and technical system—in which knowledge about trees and gardens, fallow fields and orchards, are tied together in different ways by different places. Knowledge *of* plants is also of places and terrains, of soils, and the conditions of growth. Knowledge moves toward usage, and usage is always a matter of social positioning, time, place, and need. Need is conditioned by who an individual is in relation to others.⁷⁸

CONCLUSION

The TKRN project is an attempt to think, along with Reite people, about their stated desire to preserve their *kastom* for future generations and to be responsive to my relationship with them and its foundations. Riles writes that “ethnographic response is part art and part technique, part invention and part convention, part the ethnographer’s own work and part the effect of allowing others to work upon the ethnographer. It is theoretically informed but not theoretically determined.”⁷⁹ She proposes that “anthropologists [should] begin to think of what we share with our subjects as a source of the very conceptual distance that makes analytic progress possible.”⁸⁰ Here the contrast between Hunn’s and Riles’s approaches is apparent. However, they share a source of conceptual distance that will enable an appreciation of knowledge forms in different guises.

In this chapter, I have emphasized relationality because relations have proved to be a central aspect of knowledge on the Rai Coast, and because they appear there in ways that are unfamiliar in a modernist conception of knowledge. *Relationality* refers to the form that knowledge takes, to the aesthetic of its form. The criteria for recognition—the

aesthetics of the knowledge form—include a reference to where and how knowledge is constituted and exists, and that its effects are apparent on relations between people, and between people and things. Restriction is geared toward protecting access to the potential of relationships themselves, not to any knowledge object. This chapter has intended to establish the possibility of recognizing different knowledge aesthetics such as this, and to illustrate the idea by use of a specific contrast between a Rai Coast form and an anthropological, modernist academic aesthetic of knowledge. I have assumed that there is a connection between the modernist context of academic knowledge production and intellectual property regimes that have arisen in the same historical and social context. Notions of intellectual property being a form of ownership over knowledge, and a modernist form of knowledge, are both part of the same frame. That is a frame in which knowledge can be, and regularly is, separated from its relations of production and use and has to be reconnected to owners as an abstracted, knowledge object. Reite people, on the other hand, maintain that ownership is *built into* knowledge because it is always in, and of, a relationship.

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Notes

1. Paul Sillitoe, "Local Science vs Global Science: An Overview," in *Local Science vs Global Science: Approaches to Indigenous Knowledge in International Development*, ed. Paul Sillitoe (Oxford: Berghahn Books, 2007), 1–27; Toon van Meijl, "Doing Indigenous Epistemology: Internal Debates about Inside Knowledge in Māori Society," *Current Anthropology* 60, no. 2 (2019): 155–156.
2. The chapter refers to speakers of the Nekgini language, residents of Reite village, on the north coast of Papua New Guinea (PNG). These villagers are multilingual, also utilizing one of the official languages of PNG called *Neo-Melanesian*.

3. "Traditional Knowledge," WIPO World Intellectual Property Organization (website), accessed October 31, 2019, <https://www.wipo.int/tk/en/tk>.
4. UNESCO, *The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions*, Paris, October 20, 2005, <https://en.unesco.org/creativity/sites/creativity/files/passeport-convention2005-web2.pdf>, 2.
5. Epeli Hau'ofa, "Our Sea of Islands," in *A New Oceania: Rediscovering Our Sea of Islands*, ed. Eric Waddell, Vijay Naidu, and Epeli Hau'ofa (Suva, Fiji: University of the South Pacific School of Social and Economic Development, in association with Beake House, 1993), 2–16.
6. Subramani, "The Oceanic Imagery," *Contemporary Pacific* 13, no. 1 (2001): 149–162; James Leach and Richard Davis, "Recognising and Translating Knowledge: Navigating the Political, Epistemological, Legal and Ontological," *Anthropological Forum: A Journal of Social Anthropology and Comparative Sociology*, 22, no. 3 (2012): 209–223.
7. See Porer Nombo and James Leach, *Reite Plants: An Ethnobotanical Study in Tok Pisin and English* (Canberra: Australian National University Press, 2010), 169.
8. An important point in any discussion of IP and *traditional knowledge* holders.
9. As Strathern and Hirsch pithily put it, the concepts of "'indigeneity,' 'heritage,' 'traditional knowledge' and such get filtered through the discourse of an international community that must trade in its own conceptual currency (NGO forums, UNESCO, WIPO). But what may be important politically may be less than useful analytically." Marilyn Strathern and Eric Hirsch, introduction to *Transactions and Creations: Property Debates and the Stimulus of Melanesia*, ed. Eric Hirsch and Marilyn Strathern (Oxford: Berghahn Books, 2004), 5.
10. See Mario Biagioli, "From Ciphers to Confidentiality: Secrecy, Openness and Priority in Science," *British Society for the History of Science* 45, no. 2 (2012): 1–21.
11. For example, how one can reveal an invention or discovery while protecting against its appropriation, e.g., Biagioli.
12. Van Meijl, "Doing Indigenous Epistemology," 165.
13. In other words, interrogating the criteria used to evaluate whether a being or entity is a "person" in the sense of socially recognized as such. For examples and elaborations, see chapters in Michael Carrithers, Steven Collins, and Steven Lukes, eds., *The Category of the Person: Anthropology, Philosophy, History* (Cambridge: Cambridge University Press, 1985).
14. For example, Jadran Mimica, *Intimations of Infinity: The Mythopoeia of the Iqwaye Counting System and Number* (Oxford: Berg, 1988). From a description of the counting system of Iqwaye people of Papua New Guinea, the author develops an interpretation of the Iqwaye kinship system and cosmology, culminating in a powerful critique of Western assumptions about the development of rational thought.
15. Tony Crook, *Anthropological Knowledge, Secrecy and Bolivip, Papua New Guinea: Exchanging Skin* (Oxford: Oxford University Press, 2007), 10.

16. Strathern and Hirsch, introduction to *Transactions and Creations*, 5.
17. Lamont Lindstrom, *Knowledge and Power in a South Pacific Society* (Washington, DC: Smithsonian Institution Press, 1990), xiv.
18. Peter Lawrence, *Road Belong Cargo: A Study of the Cargo Movement in the Southern Madang District, Papua New Guinea* (Melbourne: Melbourne University Press, 1964), 9.
19. Lawrence, 30.
20. Lawrence, 31.
21. Lawrence, 30.
22. Lawrence, 28.
23. Lawrence, 29.
24. The starchy vegetables *Colocasia esculenta* var. *antiquarium* and *Dioscorea* sp., respectively.
25. C. B. MacPherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Clarendon Press, 1962). MacPherson details the development of the notion of an individual and a unitary self, distinct from other people, and who is the logical and natural possessor of the things they labor to produce, in European statecraft.
26. See James Leach, "'Twenty Toea Has No Power Now': Property, Customary Tenure, and Pressure on Land near the Ramu Nickel Mine, Madang, Papua New Guinea," *Pacific Studies* 34, no. 2/3 (2011): 295–322.
27. Such as steel tools that allow for larger food gardens, and penicillin that has reduced infant mortality.
28. See Leach, "Twenty Toea," 305–306.
29. Procedures outlined by their taro "deity." "Story" here is a translation of the neo-Melanesian *stori*, a synonym for myth, but also a translation of the Nekgini term *patuki*. *Patuki* refers to not just a narrative but also the characters/deities of the myth and, crucially, is used locally as a term meaning knowledge in general.
30. Anyone making such a payment would divide it into an obligatory amount and an extra amount, and demand to be given the relevant *paru*. Payment would be made in the currency of kin exchange: ancestral valuables and pork. Today, cash and trade store goods are part of such a payment, but cannot be used to replace pigs or other valuables.
31. Simon Harrison's 1990 ethnography, *Stealing People's Names*, about the Sepik River (PNG), is illustrative here. Harrison describes public ritualized battles in which groups of men vie to show, in whispered duels, that they know the true names of ancestors, and thus have rights over territory and ritual power. He details a similar connection between secret knowledge and everyday accomplishments. Simon Harrison, *Stealing People's Names: History and Politics in a Sepik River Cosmology* (Cambridge: Cambridge University Press, 1990). Similarly, Lawrence notes, "As elsewhere in

Melanesia, restricted knowledge (technological and otherwise) is part of the requisite capital that supports the production of material goods." *Road Belong Cargo*, 29–30. Meanwhile, Lindstrom adds that "people attempt purposely to control those procedures that order the production, circulation, and consumption of knowledge statements." Lindstrom, *Knowledge and Power*, 10.

32. K. A. Gourlay, *Sound Producing Instruments in Traditional Societies: A Study of Esoteric Instruments and Their Role in Male/Female Relations* (Port Moresby: Australian National University, 1975), 126.

33. I explore this in relation to "brands" and "branding" in James Leach, "'We Will Make a Man Out of You': Taro 'Brands' and Initiation 'Styles' on the Rai Coast of Papua New Guinea," *UC Davis Law Review* 47, no. 2 (2013): 633–656.

34. James Leach, "Situated Connections: Rights and Intellectual Resources in a Rai Coast Society," *Social Anthropology* 8, no. 2 (2000): 163–179.

35. Crook, *Anthropological Knowledge*, 23–24.

36. James Leach, "Leaving the Magic Out: Knowledge and Effect in Different Places," *Anthropological Forum* 22, no. 3 (2012): 251–270.

37. I ask the reader to bear with the personal and self-referential aspect of what follows. It is unfortunate but necessary, as I am unavoidably involved in the documentation of Reite *kastom*.

38. Strathern and Hirsch, introduction to *Transactions and Creations*, 5.

39. Lindstrom, *Knowledge and Power*, xi.

40. Lawrence, *Road Belong Cargo*, 17.

41. On this point, see Don Kulick and Christopher Stroud, "Christianity, Cargo and Ideas of Self: Patterns of Literacy in a Papua New Guinean Village," *Man* 25, no. 2 (1990): 286–304; and Roy Wagner, *The Invention of Culture* (Chicago: Chicago University Press, 1975), 31–33.

42. Lawrence, *Road Belong Cargo*, 30.

43. See Leach, "Leaving the Magic Out."

44. "Caution: Traditional Knowledge. Principles of Merit Need to Be Spelt Out in Distinguishing Valuable Knowledge from Myth," *Nature* 401, no. 6754 (1999): 623, highlighted by Sillitoe, "Local vs Global Science," 5.

45. "Caution: Traditional Knowledge," 623.

46. See, e.g., Sillitoe "Local vs. Global Science," 15–16.

47. Cori Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico* (Princeton, NJ: Princeton University Press, 2003), 5–7.

48. Strathern and Hirsch, introduction to *Transactions and Creations*, 2; emphasis added.

49. "Giles Lane," Proboscis, accessed July 15, 2018, <http://proboscis.org.uk/about/people/giles-lane/>.

50. Giles Lane, "Indigenous Public Authoring in Papua New Guinea," *Proboscis*, October 2, 2013, <http://proboscis.org.uk/5309/indigenous-public-authoring-in-papua-new-guinea/>.
51. Porer Nombo and Pinbin Sisau, "*Mi sori long ol: Seeing the Ancestors in the Collection*," in *Melanesia: Art and Encounter*, ed. Lissant Bolton et al. (London: British Museum Press, 2013), 92–95.
52. Many people in Reite are illiterate, and in several of these cases, their children or grandchildren have assisted them in the writing of stories or processes.
53. "TK Reite Notebooks," Reite TKRN Library, accessed November 27, 2020, <https://reitetknlrlibrary.wordpress.com/>. For a time, Reite people created and uploaded booklets, managed their own website, and taught others how to use the TKRN process.
54. Crook, *Anthropological Knowledge*, 10–11.
55. Annelise Riles, "Introduction: In Response," in *Documents: Artifacts of Modern Knowledge*, ed. Annelise Riles (Ann Arbor: University of Michigan Press, 2006), 23.
56. Sillitoe, "Local vs Global Science," 15–16.
57. Christoph Antons, "Biodiversity, Intangible Cultural Heritage and Intellectual Property," in *The Routledge Handbook on Biodiversity and the Law*, ed. Charles R. McManis and Burton Ong (London: Routledge, 2018), 313–325.
58. See, for example, Lorraine Aragon and James Leach, "Arts and Owners: Intellectual Property Law and the Politics of Scale in Indonesian Arts," *American Ethnologist* 35, no. 4 (2008): 607–631.
59. Christoph Antons, "What Is 'Traditional Cultural Expression'?—International Definitions and Their Application in Developing Asia," *WIPO Journal* 1 (2009): 103–116; Christoph Antons, "Epistemic Communities and the 'People without History': The Contribution of Intellectual Property Law to the 'Safeguarding' of Intangible Cultural Heritage," in *Diversity in Intellectual Property: Identities, Interests and Intersections*, ed. Irene Calboli and Srividhya Ragavan (New York: Cambridge University Press, 2015), 453–471.
60. Strathern and Hirsch, introduction to *Transactions and Creations*.
61. *The Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act 2016*, WIPO 2016, accessed November 27, 2020, <https://www.wipo.int/edocs/lexdocs/laws/en/zm/zm056en.pdf>.
62. Eugene Hunn, "Meeting of Minds: How Do We Share Our Appreciation of Traditional Environmental Knowledge?," in "Ethnobiology and the Science of Humankind," ed. Roy Allen, special issue, *Journal of the Royal Anthropological Institute* 12, no. 1 (2006): 143.
63. Hunn, 143.
64. Hunn, 156.
65. Ian Saem Majnep and Ralph Bulmer, *Birds of My Kalam Country* (Auckland: Auckland University Press, 1977). Their book was also an inspiration for Porer Nombo and myself in our collaboration on *Reite Plants* (see above).

66. Hunn, "Meeting of Minds," 154–158.
67. Majnep and Bulmer, *Birds*, 39.
68. Majnep and Bulmer, 39–40.
69. Riles, "Introduction: In Response," 4.
70. Riles, 2; see also van Meijl, "Doing Indigenous Epistemology," 155–156.
71. Riles, "Introduction: In Response," 2.
72. Riles, 24–28.
73. Crook, *Anthropological Knowledge*, 10–11.
74. Crook, 11.
75. Fredrik Barth, *Ritual and Knowledge among the Baktaman of New Guinea* (New Haven, CT: Yale University Press, 1975).
76. Crook, *Anthropological Knowledge*, 11.
77. Fred Damon, *Trees, Knots and Outriggers: Environmental Knowledge in the Northeast Kula Ring* (Oxford: Berghahn Books, 2017).
78. Damon, 249, 270–272.
79. Riles, "Introduction: In Response," 5.
80. Annelise Riles, "[Deadlines]: Removing the Brackets on Politics in Bureaucratic and Anthropological Analysis," in Riles, *Documents*, 89.

Bibliography

- Antons, Christoph. "Biodiversity, Intangible Cultural Heritage and Intellectual Property." In *The Routledge Handbook on Biodiversity and the Law*, edited by Charles R. McManis and Burton Ong, 313–325. London: Routledge, 2018.
- Antons, Christoph. "Epistemic Communities and the 'People without History': The Contribution of Intellectual Property Law to the 'Safeguarding' of Intangible Cultural Heritage." In *Diversity in Intellectual Property: Identities, Interests and Intersections*, edited by Irene Calboli and Srividhya Ragavan, 453–471. New York: Cambridge University Press, 2015.
- Antons, Christoph. "What Is 'Traditional Cultural Expression'? International Definitions and Their Application in Developing Asia." *WIPO Journal* 1 (2009): 103–116.
- Aragon, Lorraine, and James Leach. "Arts and Owners: Intellectual Property Law and the Politics of Scale in Indonesian Arts." *American Ethnologist* 35, no. 4 (2008): 607–631.
- Barth, Fredrik. *Ritual and Knowledge among the Baktaman of New Guinea*. New Haven, CT: Yale University Press, 1975.

Biagioli, Mario. "From Ciphers to Confidentiality: Secrecy, Openness and Priority in Science." *British Society for the History of Science* 45, no. 2 (2012): 1–21.

Bolton, Lissant. *Unfolding the Moon: Enacting Women's "Kastom" in Vanuatu*. Honolulu: University of Hawai'i Press, 2003.

Carrithers, Michael, Steven Collins, and Steven Lukes, eds. *The Category of the Person: Anthropology, Philosophy, History*. Cambridge: Cambridge University Press, 1985.

Crook, Tony. *Anthropological Knowledge, Secrecy and Bolivip, Papua New Guinea: Exchanging Skin*. Oxford: Oxford University Press, 2007.

Damon, Fred. K. *Trees, Knots and Outriggers: Environmental Knowledge in the Northeast Kula Ring*. Oxford: Berghahn Books, 2017.

Gourlay, K. A. *Sound Producing Instruments in Traditional Societies: A Study of Esoteric Instruments and Their Role in Male/Female Relations*. Port Moresby: Australian National University, 1975.

Harrison, Simon. *Stealing People's Names: History and Politics in a Sepik River Cosmology*. Cambridge: Cambridge University Press, 1990.

Hau'ofa, Epeli. "Our Sea of Islands." In *A New Oceania: Rediscovering Our Sea of Islands*, edited by Eric Waddell, Vijay Naidu, and Epeli Hau'ofa, 2–16. Suva, Fiji: University of the South Pacific School of Social and Economic Development, in association with Beake House, 1993.

Hayden, Cori. *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*. Princeton, NJ: Princeton University Press, 2003.

Hunn, Eugene. "Meeting of Minds: How Do We Share Our Appreciation of Traditional Environmental Knowledge?" In "Ethnobiology and the Science of Humankind," edited by Roy Allen. Special issue, *Journal of the Royal Anthropological Institute* 12, no. 1 (2006): 143–160.

Kulick, Don, and Christopher Stroud. "Christianity, Cargo and Ideas of Self: Patterns of Literacy in a Papua New Guinean Village." *Man* 25, no. 2 (1990): 286–304.

Lane, Giles. "Indigenous Public Authoring in Papua New Guinea." *Proboscis*, October 2, 2013, <http://proboscis.org.uk/5309/indigenous-public-authoring-in-papua-new-guinea/>.

Lawrence, Peter. *Road Belong Cargo: A Study of the Cargo Movement in the Southern Madang District, Papua New Guinea*. Melbourne: Melbourne University Press, 1964.

Leach, James. "Leaving the Magic Out: Knowledge and Effect in Different Places." *Anthropological Forum* 22, no. 3 (2012): 251–270.

Leach, James. "Situated Connections: Rights and Intellectual Resources in a Rai Coast Society." *Social Anthropology* 8, no. 2 (2000): 163–179.

Leach, James. "'Twenty Toea Has No Power Now': Property, Customary Tenure, and Pressure on Land near the Ramu Nickel Mine, Madang, Papua New Guinea." *Pacific Studies* 34, no. 2/3 (2011): 295–322.

Leach, James. "'We Will Make a Man Out of You': Taro 'Brands' and Initiation 'Styles' on the Rai Coast of Papua New Guinea." *UC Davis Law Review* 47, no. 2 (2013): 633–656.

Leach, James, and Richard Davis. "Recognising and Translating Knowledge: Navigating the Political, Epistemological, Legal and Ontological." *Anthropological Forum: A Journal of Social Anthropology and Comparative Sociology* 22, no. 3 (2012): 209–223.

Lindstrom, Lamont. *Knowledge and Power in a South Pacific Society*. Washington, DC: Smithsonian Institution Press, 1990.

MacPherson, C. B. *The Political Theory of Possessive Individualism: Hobbes to Locke*. Oxford: Clarendon Press, 1962.

Majnep, Ian Saem, and Ralph Bulmer. *Birds of My Kalam Country*. Auckland: Auckland University Press, 1977.

Mimica, Jadran. *Intimations of Infinity: The Mythopoeia of the Iqwaye Counting System and Number*. Oxford: Berg, 1988.

Nombo, Porer, and James Leach. *Reite Plants: An Ethnobotanical Study in Tok Pisin and English*. Canberra: Australian National University Press, 2010.

Nombo, Porer, and Pinbin Sisau. "Mi sori long ol: Seeing the Ancestors in the Collection." In *Melanesia: Art and Encounter*, edited by Lissant Bolton, Nicholas Thomas, Elizabeth Bonshek, Julie Adams, and Ben Burt, 92–95. London: British Museum Press, 2013.

Riles, Annelise. "[Deadlines]: Removing the Brackets on Politics in Bureaucratic and Anthropological Analysis." In *Documents: Artifacts of Modern Knowledge*, edited by Annelise Riles, 71–93. Ann Arbor: University of Michigan Press, 2006.

Riles, Annelise. "Introduction: In Response." In *Documents: Artifacts of Modern Knowledge*, edited by Annelise Riles, 1–39. Ann Arbor: University of Michigan Press, 2006.

Sillitoe, Paul. "Local Science vs Global Science: An Overview." In *Local Science vs Global Science: Approaches to Indigenous Knowledge in International Development*, edited by Paul Sillitoe, 1–27. Oxford: Berghahn Books, 2007.

Strathern, Marilyn, and Eric Hirsch. Introduction to *Transactions and Creations: Property Debates and the Stimulus of Melanesia*, edited by Eric Hirsch and Marilyn Strathern, 1–20. Oxford: Berghahn Books, 2004.

Subramani. "The Oceanic Imagery." *Contemporary Pacific* 13, no. 1 (2001): 149–162.

United Nations Educational, Scientific and Cultural Organization (UNESCO). *The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions*. Paris: UNESCO, October 20, 2005. <https://en.unesco.org/creativity/sites/creativity/files/passeport-convention2005-web2.pdf>.

Van Meijl, Toon. "Doing Indigenous Epistemology: Internal Debates about Inside Knowledge in Māori Society." *Current Anthropology* 60, no. 2 (2019): 155–174.

Wagner, Roy. *The Invention of Culture*. Chicago: Chicago University Press, 1975.

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