

Traditional Knowledge
William Fisher and Ruth Okediji

Version 2.0
January 2021

Table of Contents

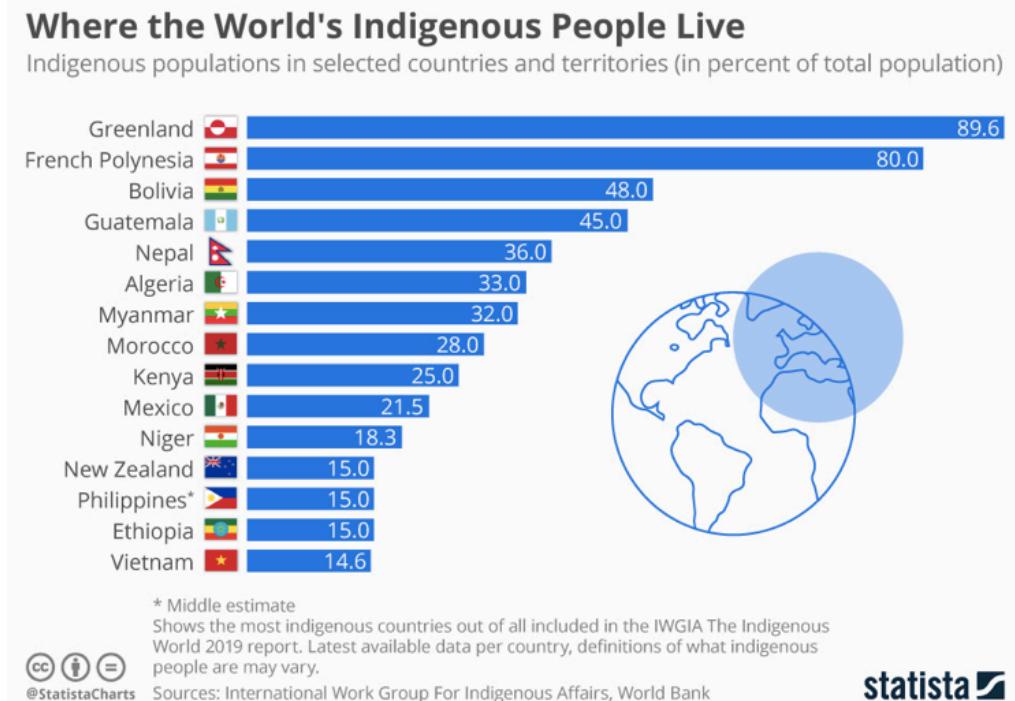
<i>Introduction</i>	2
<i>Case Studies</i>	4
Quassia Amara.....	4
Mayan Weavers	7
Tibetan Rugs.....	10
<i>The Law</i>	15
National Systems	15
International Systems.....	17
<i>Perspectives</i>	21
Joseph Wekundah, “Why Protect Traditional Knowledge”	21
Waziyatawin, “Indigenous Knowledge, Anti-Colonialism, and Empowerment”	22
Stephen Munzer and Kal Raustiala, “The Uneasy Case for Intellectual Property Rights in Traditional Knowledge”	25
Donny Woolagoodja, “Testimony before the Land and Environmental Court”	37
<i>Reform Proposals</i>	39
World Intellectual Property Organization, “Traditional Knowledge and Intellectual Property”	39
Fisher, “The Puzzle of Traditional Knowledge”	39
Ruth Okediji, “‘Closely Held’ Traditional Knowledge”.....	43

Introduction

There is no universally accepted definition of an “indigenous group,” but the following passage, provided by the World Health Organization, captures what most sociologists mean by the term:

Indigenous populations are communities that live within, or are attached to, geographically distinct traditional habitats or ancestral territories, and who identify themselves as being part of a distinct cultural group, descended from groups present in the area before modern states were created and current borders defined. They generally maintain cultural and social identities, and social, economic, cultural and political institutions, separate from the mainstream or dominant society or culture.

Today, roughly 500 million people belong to groups that identify themselves as indigenous. The countries in which they form the largest percentages of the populations are shown below:



In China, roughly 8.5% of the population (aprx. 110 million people) are members of indigenous groups; in the United States, roughly 1.5% (aprx. 5 million people) are members of such groups.

In all countries, members of indigenous groups fare worse than the rest of the population with respect to virtually every measure of well-being: income, employment, educational attainment and opportunity, access to safe drinking water, vaccination rates, and life expectancy. The United States is typical in this respect. The poverty rate among Native

Americans living on reservations is 39 percent; among Native American living off reservations, the poverty rate is 26 percent. By comparison, the rate for whites is 9 percent; for African Americans, 25 percent; for Latinos, 23 percent; and for Asian Americans, 13 percent.

The relative poverty of indigenous groups derives in substantial part from their limited rights to resources. To be sure, in some countries (including the United States), indigenous groups have rights to significant tracts of land (rights usually rooted either in long-term occupancy or in treaty provisions) but typically the tracts in question have limited utility and modest value. In some countries (also including the United States), members of such groups enjoy special legal privileges to hunt and fish, but, again, those privileges rarely provide them reliable sources of revenue.

Recently, many indigenous groups have sought recognition of their legal rights to another potential resource: what has come to be known as their “traditional knowledge.” Typically, the knowledge at issue consists of understanding or skill developed and preserved over a long period of time by the members of the group concerning either socially beneficial uses of natural resources (such as plants, animals, or components thereof) or cultural practices (such as rituals, narratives, poems, images, designs, clothing, fabrics, music, or dances).

This set of materials examines the current state of the law governing uses of knowledge of these sorts and the increasingly intense debate concerning how that law should be reformed. We begin with three case studies, which describe in some detail instances in which indigenous groups have asserted claims to traditional knowledge and the responses to their demands. We then describe the relevant legal regimes at the national and international levels. Four perspectives on which of the claims of the indigenous groups are justified follow. The final section contains a few of the many suggestions concerning how the law should be reformed.

Note on sources: Portions of these materials are adapted from William Fisher, “The Puzzle of Traditional Knowledge,” 67 Duke Law Journal 1511 (2018) and Ruth Okediji, “A Tiered Approach to Rights in Traditional Knowledge,” 58 Washburn Law Review 271 (2019). To keep the length of the materials manageable, we have omitted the footnotes in most of the documents.

Case Studies

Quassia Amara

Each year, roughly 200 million people suffer from malaria and roughly 500,000 die from it. Currently, the standard treatment for malaria is artemisinin combination therapy, which is usually effective in treating the disease. Unfortunately, for various reasons, the resistance of malaria parasites to artemisinin is increasing. Partly as a result, scientists and pharmaceutical companies have begun exploring alternative therapies with greater urgency.

One promising source of such alternatives is the set of herbal remedies that have been used for centuries by indigenous groups to combat malaria. A wide variety of plants are employed in such remedies. One recent survey identified 102 species in use in Nigeria alone; another identified 99 in use in a single state in northern Brazil.

Among those plants is *Quassia amara*—sometimes known as bitterroot. Its medicinal power has been appreciated for centuries. Indeed, in 1762 botanist Carl Linnaeus gave the plant its scientific name, allegedly to honor Graman Quassi, who, while a slave in Surinam, identified its effectiveness in combating fever and intestinal parasites.

For a biochemist, determining which of the plants employed in traditional remedies have *some* therapeutic benefits with respect to malaria is relatively straightforward. Determining which is *most* efficacious—or, more precisely, which contains compounds that could be most efficacious—is more difficult and time-consuming. Some assistance in determining which of the many extant traditional remedies are worth investigating can be obtained by consulting the current members of the indigenous groups that developed, refined, and maintained them.

French Guiana is an especially attractive place to conduct a study of this sort, partly because the endemic prevalence of malaria there is very high and partly because several indigenous groups in the country have developed traditional plant-based preventive and therapeutic systems for controlling the disease. (Perhaps for those reasons, although the infection rate is high, the death rate in Guiana from malaria is remarkably low—fewer than five cases a year.) Attracted by these conditions, in 2003 a group of researchers associated with the Institut de Recherche pour le Développement (IRD), based in Marseille, conducted a study of the “knowledge[,] attitudes and practices” in four carefully selected villages to ascertain how the residents dealt with malaria.

The researchers interviewed a total of 117 adults. Thirty-five identified themselves as Paliku; fourteen self-identified as Galibi; seven were European by background; fourteen were Brazilian; one was Hmong; and forty-six were Creole. The first two of these clusters are members of indigenous groups. The people commonly known as the Paliku or Palikur have been living in the area just north of the mouth of the Amazon River for centuries. Beginning in the sixteenth century, the Portuguese colonists abused them—enslaving some, killing others, driving still others inland. The French colonists to the north of the Portuguese settlements treated the Paliku people somewhat better, which helps explains

why, today, roughly one third of the group's members live in French Guiana instead of Brazil. Traditionally, the Paliku supported themselves by fishing, typically with bow and arrow; hunting of tapir, deer, pig, cutia, and monkeys; and horticulture, primarily of manioc. Today, some have begun to participate in the market economy. The first language of most is Parikwaki, part of the Arawak family of languages.

The Galibi, also known as the Kalina, have lived in the region at least as long. Prior to the arrival of European colonists, the Galibi were numerous and occupied much of the area between the mouths of the Amazon and Orinoco Rivers. Genocide and disease reduced the population sharply, but substantial numbers still reside in French Guiana. Most speak Kali'na, a member of the Cariban family of languages, although some of the youngest generation have ceased to do so.

From their interviews with these various groups, the IRD researchers concluded the following: most residents of the four villages employed a combination of traditional and modern medicines to treat malaria; twenty-seven different plants were used in the traditional medicines; and of those plants, *Quassia amara* (alone or in combination with other plants) was used most often and thought to be the most effective.

These findings encouraged the same researchers—and others aware of their work—to try to isolate the compound within *Quassia amara* that had proven so effective. Discovery of the active ingredient occurred in stages. The first wave of research concluded that the key compound was Simalikalactone D. A second wave, however, found that Simalikalactone D was less effective or more toxic than previously thought and that the decisive ingredient was a close cousin, Simalikalactone E.

The latter discovery prompted the researchers to seek patent protection for the compound. A U.S. Patent was issued in 2013, and an EPO Patent followed in 2015. Why exactly did the researchers seek legal control over the molecule and its use? They subsequently explained their motives as follows:

National research and innovation policies in most countries, including France, have strong expectations concerning knowledge transfer activities by universities and research institutes. Performance on these matters is usually measured by indicators such as the number of patents filed and license agreements signed, and the overall royalties and contract research collaboration revenues. These indicators are also commonly used by funding agencies as a measure of the overall quality of the applicant. Furthermore, concerning medical innovation, it is generally accepted that strong intellectual property protection is a mandatory warranty in order to obtain a return on the investments necessary to launch new drugs on the market. With this in mind, SkE was patented in 2009 in the hope that a pharmaceutical company could support the expensive toxicological studies and preclinical evaluations necessary for the development of a new antimalarial.

Both in the publications reporting the fruits of their research and in their patent applications, the researchers made clear the extent to which they had relied on the findings of the ethnopharmaceutical investigation in Guiana. (Their transparency in this respect was unusual.) However, they made no provision for compensating the individuals they had interviewed, the indigenous groups to which those individuals belonged, the government of Guiana, or the government of France (of which Guiana is formally a part) for the benefit they had obtained from the study. Why not? They later offered several reasons for this omission:

[I]n 2009, in French Guiana, no legal framework required researchers to set up a benefit-sharing contract. In the absence of legal provisions, setting up a benefit-sharing contract, would have necessitated an arbitrary choice of rights holders. This situation would have been source of foreseeable conflicts; especially that *Quassia amara* and associated knowledge are biological and informational resources, which, under French law, fall within the public domain.

The combination of the patent grants to IRD and the absence of any provision for the individuals or groups that the researchers had interviewed came to the attention of Thomas Burelli, a legal scholar at the University of Ottawa, and Fondation Daniel Mitterand France Libertés, a nongovernmental organization (NGO) devoted to the defense of human rights. In October 2015, Burelli and France Libertés accused IRD of “biopiraterie.” IRD’s conduct, they claimed, perpetuated colonial practices and was “both immoral and in conflict with intellectual property regulations.” That accusation led to considerable public criticism of IRD. Among the sharpest critics were Rodolphe Alexandre, President of the Regional Council of French Guiana, and the Organization of Indigenous Nations in Guiana. A statement from the latter denounced IRD’s conduct, concluding simply: “l’IRD a abusé des connaissances de la population guyanaise . . .”

The IRD leadership and researchers resented these attacks and initially resisted demands that they attend in some way to the interests of the people and groups whose knowledge originally helped shape their research. In the end, though, the researchers capitulated. In February 2016, they issued a statement indicating that IRD would work with “authorities” in Guiana to develop a protocol that would guarantee a fair division of the benefits of any commercialization of IRD’s patents and ensure that the people of Guiana could obtain any drugs that grew out of the research at an affordable price. As of this writing, no details concerning the promised agreement are publicly available.

Mayan Weavers

[This section was written principally by Christine Gant]

Roughly half of the population of Guatemala are members of the Mayan indigenous group. A distinct language and geographic separation from the rest of the population help maintain the identity of the group. By all measures, Mayans are substantially poorer than other groups in Guatemala, and they have little political power.

For centuries, Mayan women have produced a distinctive cloth. Illustrations of the design and the processes by which it is produced appear below.



Photo source: Maya Kem Colectivo Facebook page; Photo credit: Mardoqueo Matías

Two weaving techniques are employed to produce the cloth: backstrap looming and brocade weaving. Both are labor intensive; producing even a single blouse (*huipil*) requires three month's full-time work by a weaver.

Many of garments produced in this fashion are worn by the Mayans themselves. Some, however, are sold – typically to tourists visiting Antigua or other popular destinations within the country. Most often, weavers set up shop on the street and sell products to passersby. A photograph of this practice appears below.



Source: <https://www.antiguahotelsolutions.com/antigua-guatemala/>

A group known as Mujeres de AFEDES or simply AFEDES (in Spanish, “Asociación Femenina para el Desarrollo de Sacatépequez”; in English, “Women’s Association for the Development of Sacatépequez”) represents a predominantly Kaqchikel Mayan group of women in the region of Sacatépequez, Guatemala. AFEDES objects to the economic and cultural practices summarized above on four grounds:

First, the price that Mayan women are able to charge when selling goods on the street is far too low.

Second, some non-indigenous Guatemalan clothing designers have appropriated traditional Mayan designs and then sold garments and accessories embodying them at high prices, without compensating the groups from which the patterns emanated. An example appears below.



the founder

Alida Boer founded MARIAS in 2011 as a result of her love for fashion and design, appreciation of Guatemalan craftsmanship, and commitment to empowering women. Inspired by the many elaborate techniques she saw while visiting remote regions in her home country of Guatemala, Alida was determined to showcase this artistic heritage on a worldwide scale. She founded MARIAS to blend this artisanal couture with contemporary styles and carry on this beautiful legacy.

[SEE THE LOOKBOOK](#)

it's in the details

Originally inspired by the artistry of the traditional huipil textile, Marias combines artisanal traditions with contemporary shapes. Our brand has grown to incorporate other fine techniques into their styles, such as delicate beadwork and wood carving.

[SEE THE FULL STORY](#)



Third, designers in Europe and the United States are beginning to do the same thing.

Finally, on occasion, European designers have asserted intellectual-property rights in designs derived from Mayan suppliers to prevent Mayan weavers from continuing to produce those patterns themselves. An example is summarized below.

The case of a Mayan woman, who was threatened with a lawsuit by an Italian fashion designer if she dared to produce textiles with the same design as those she had commissioned her to weave, has become the rallying cry of an indigenous women's legal battle to protect ancestral designs.

The weaver comes from Santiago Sacatepéquez, a predominantly Mayan Kakchiquel municipality located 27 kilometers northwest of Guatemala City, and chose not to reveal her identity due to fear of reprisal from the designer.

“[The designer] paid the weaver and said: ‘Here’s your money but don’t reproduce the same design because I’m going to register it under the intellectual property law, which means I can sue you if you do so. The law is on my side’,” Angelina Aspuac, a member of the Women’s Association for the Development of Sacatepéquez (AFEDES), a grassroots indigenous development organization that is campaigning to amend Guatemala’s current intellectual property law to include Mayan people’s collective rights over ancestral designs, told *Latinamerica Press*.¹

The grounds on which AFEDES contends that these practices are unjust are presented in a short video, which can be found at <https://www.facebook.com/ajplusenglish/videos/959026060905568/>.

Tibetan Rugs

In the nineteenth century, weavers in central Tibet developed a distinctive style of carpet. Many of these carpets were meant to be used for prayer and other spiritual purposes (such as wrapping the pillars of temples), while others were used in secular contexts, such as padding saddles or as seating mats indoors. The patterns of the rugs typically alluded in some way to the lives of the Buddha or of Buddhist monks. In developing them, the weavers were influenced by aesthetic traditions in East Turkestan, Central Asia, China, and India. The material most often employed to weave the rugs was a distinctive wool, known as Changpel, taken from Tibetan highland sheep. Changpel is unusually thick, strong, and high in lanolin—and thus has a distinctive texture. The most unusual aspect of these carpets was the method by which they were woven, which dramatically affected their appearance. Tom O’Neill explains:

Tibetan hand-knotted carpets are woven on vertical looms that have expandable beams to control the tension of the warp, around which it was continuously wound. This preliminary process, known as ‘dressing’ the loom, was performed prior to weaving, with the loom laid on the floor, the threads of the warp being straightened after it had been set back up. The warp was traditionally made from hand-spun wool . . . and the texture of this wool warp was in older Tibetan carpets extremely variable, making it: . . . individualistic to the extreme: the unique method of mounting the loom and tensioning the warp led to more irregularities that were peculiar to each weaver’s tension. . . .

Most early Tibetan carpets were small, and woven by a single person. An end binding is formed by throwing four or five wefts before the actual knotting of the pile begins. Then a process of knotting began which was, and is today, a technique that remains exclusive to Tibetan carpet weaving.

¹ Louisa Reynolds, “GUATEMALA: Foreign Companies Plagiarize Maya Ancestral Designs,” *Latinamerica Press*, December 15, 2016, <<http://www.latinamericapress.org/articles.asp?art=7383>>.

Generally, the piles of other Oriental hand-knotted carpets are formed by wool threads looped around the warp and weft one at a time and then cut to length. The pile of Tibetan carpets is formed instead around a metal gauge rod which is tied to the warp, and the wool is looped continuously around both the warp and the gauge rod until there is a colour change, when the wool is cut and the new colour tied in. When the gauge rod has been completely covered by a row of loops, it is driven down to the previously knotted rows and then a flat knife is slid across the face of the cylindrical rod, cutting the loops to form the pile. This technique of ‘cutting loops’ was thought by Denwood and other historians of the Tibetan carpets to be an archaic method which adapted South-East to Central Asian styles of weaving, and was not found anywhere but in Tibet

Most of these carpets were woven in individual households, typically by women. By the late nineteenth century, some of the weaving seems to have been done in larger workplaces, which were financially supported by feudal landlords. A few examples of this art form are shown below.



*"Pillar-style Sleeping Rug," 3'0" x 6'4"
natural ground",
(19th/20th century)*



*"A naturalistic tiger skin on a
4'11" x 3'1"*

In the nineteenth century, the British Empire in India facilitated for the first time sales of Tibetan rugs to European consumers. However, the number of carpets that found their way out of Tibet was small. In 1959, the occupation of Tibet by the People's Republic of China prompted the Dalai Lama and approximately 100,000 other Tibetans to flee their country. Among the group were many of the Tibetan weavers. Most settled in Nepal, although a minority settled in the provinces of Dharamsala, Ladakh, or Sikkim in India.

At the time, Nepal was desperately poor, and most of the Tibetan refugees were also impoverished. In 1961, leaders of the Swiss Aid and Technical Assistance (SATA) organization, one of the various agencies trying to help the refugees, decided that an export market for Tibetan rugs might be cultivated, and that exploiting that market could provide

the refugees a long-term source of income. Accordingly, SATA funded the creation of weaving workshops in Nepal, hired some of the Tibetan master weavers to create the carpets and provide training to others, and educated European consumers concerning the merits of these carpets. The success of the plan prompted other organizations, such as the World Bank, to lend it their assistance as well. Tibetan and Nepalese entrepreneurs then gradually took their place.

Between 1961 and the 1990s, exports of Tibetan carpets from Nepal to Europe rose steadily, except for a brief lull in 1984. In the process, the design of the carpets evolved to match the changing tastes of European (especially German) consumers. Religious themes were used less often, abstract patterns more often. Traditional Tibetan carpets are small; the exported carpets became larger, facilitating their use as floor coverings. The intricate central areas of the traditional carpets were sometimes replaced with so-called “open fields,” containing a single color. Tibetan wool was sometimes blended with wool from New Zealand. And increased quality control made the rugs more homogenous.

From an economic standpoint, the net result of the process initiated by SATA was a remarkable success; by the end of the twentieth century, the export of Tibetan carpets had become the largest source of revenue in Nepal, enabling large numbers of Tibetan weavers to escape poverty. From a cultural standpoint, the fruits were more mixed. Many observers lamented the atrophy of some aspects of the traditional rugs. To be sure, most carpets sold in Europe and the United States as “Tibetan” continued to be made in Nepal, using the traditional Tibetan methods, either by Tibetans or by Nepalese weavers. But most of the rugs differed sharply in appearance from those that had been common in Tibet before the Chinese Revolution.

In the twenty-first century, some of these aesthetic trends were reversed. A growing group of consumers, particularly in the United States, expressed interest in more “authentic” Tibetan carpets, and a subset of high-end American and European importers began to provide them. These carpets featured the traditional Buddhist images and themes—for example, “the dragon, snow lion, lotus flower, the Buddhist knot or the phoenix”—and eschewed weaving techniques that foster homogenization. The result is that, today, a significant subset of the flow of exports looks more like the original Tibetan rugs—and typically sell at a premium. An example appears below.



The degree to which the aesthetic shift has benefitted the Tibetan refugees (and their descendants) varies. Some of the newer rugs are designed by American or European artists and are merely manufactured in Nepal. The importers most concerned with authenticity, however, typically employ business practices intended to benefit Tibetans more directly and substantially. They are more likely to rely on Tibetan designers, and the terms on which their workers are employed in Nepal are fairer than average. Last but not least, these importers typically contribute a portion of their profits to educational or cultural institutions that benefit Tibetans. The stores and websites of these importers trumpet these practices. Set forth below, for example, is the pertinent portion of the website of Doris Leslie Blau:

In the factory selected by the Doris Leslie Blau gallery, over half the employees are Tibetan. The original Tibetan Master Weavers, who came from Tibet, have trained the current master weavers. The workers in all hand manufacturing processes: carding, spinning, dyeing, weaving, shearing, carving, etc., have learned from Tibetan masters. Many factory employees have 30 years of experience

This factory provides living quarters, clean drinking water, childcare and health benefits to its employees. No manufacturing processes use child labor and the company takes steps to improve its local environment

The company has superior abilities and has a proven track record. Management philosophies and practices, including those regarding social and ecological responsibilities, are exemplary in Nepal. Doris Leslie Blau aims to produce the best quality of rugs available in Nepal, with a factory that maintains high standards for their work, employees and their families, and local environment.

Adherence to these principles seems to contribute to the importers' ability to charge atypically high prices for their carpets. A portion of that premium redounds to the benefit of Tibetans.

The Law National Systems

Currently, every country in the world establishes and enforces its own rules concerning permissible uses of traditional knowledge. The approaches they have taken vary widely, but most of the national regimes fall into one of four categories.

Countries in the first group expressly repudiate legal protection for traditional knowledge. For example, the Copyright Act of Lithuania provides: “Copyright shall not apply to . . . works of folk art.”²

In the second group of countries, courts have construed existing intellectual property laws to establish some limitations on uses of traditional knowledge. In perhaps the most famous example, Australian courts ruled that the importation and sale of carpets bearing images derived from motifs developed by aboriginal groups violated Australian copyright law.³

In the third group, legislators have modified existing intellectual property statutes to reach traditional knowledge. For example, in New Zealand, the trademark statute was amended to forbid the registration of trademarks based on Māori text or imagery where the use or registration of such marks would be offensive to the Māori.⁴ Several countries have amended their patent statutes to require applicants who relied on traditional knowledge when developing their inventions to disclose such reliance in their applications.⁵ In still other countries, “folklore” is now by statute expressly included in the ambit of copyright law—and in some of those countries is given extensive protection.⁶ Among the most ambitious of these provisions is that of Senegal, which is set forth below:

Part four—Folklore and the *domaine public payant*

Article 156. Definition of folklore.—“Folklore” means all literary and artistic productions created by authors deemed to be of Senegalese nationality that are passed from generation to generation and constitute one of the basic elements of the traditional cultural heritage of Senegal.

2. Law on Copyright and Related Rights of 2000, ch. II, § 1, art. 5 (Lith.).

3. *Milpurrurru et al. v Indofern Pty Ltd* [1994] 54 FCR 240 (Austl.), <https://jade.io/article/195477> [<https://perma.cc/6MRQ-VM9M>].

4. Māori IP, N.Z. Intell. Prop. Off., <https://www.iponz.govt.nz/about-ip/maori-ip/> [<https://perma.cc/LBC8-CTBB>].

5. For catalogues of such provisions, see David Vivas-Eugui, *Bridging the Gap on Intellectual Property and Genetic Resources in Wipo’s Intergovernmental Committee (Igc)* (International Centre for Trade and Sustainable Development (ICTSD), 2012), 31-32.; WIPO, DISCLOSURE REQUIREMENTS TABLE (Oct. 2017), http://www.wipo.int/export/sites/www/tk/en/documents/pdf/genetic_resources_disclosure.pdf [<https://perma.cc/2N6A-Y3GN>].

6. See, e.g., Law No. 2000/011 of December 19, 2000 on Copyright and Neighboring Rights Law, § 5 (Cameroon), <http://www.wipo.int/edocs/lexdocs/laws/en/cm/cm001en.pdf> [<https://perma.cc/A8PV-2FKD>]; Order No. 13 of 1989, Copyright Order, §§ 18–23 (Lesotho), <http://www.wipo.int/edocs/lexdocs/laws/en/ls/ls003en.pdf> [<https://perma.cc/5LVS-FTLG>]; Loi no. 08-024 du 23 juillet 2008, Fixant le Régime de la Propriété Littéraire et Artistique en République du Mali, ch. 3, art. 110 (Mali), <http://www.wipo.int/edocs/lexdocs/laws/fr/ml/ml015fr.pdf> [<https://perma.cc/3UJQ-M7LC>].

Law 2008-09 of January 25, 2008 on Copyright and Neighboring Rights in Senegal, pt. 4, art. 156–60 (Senegal), <http://www.wipo.int/edocs/lexdocs/laws/en/sn/sn004en.pdf> [<https://perma.cc/GWA5-EHCX>].

Article 157. Exploitation of folklore and works in the public domain.—1. The exploitation of folklore or of works derived from folklore, and of works that have fallen into the public domain on expiry of the periods provided for in Articles 51 to 55, shall be declared to the collective management society approved for that purpose and shall be subject to payment of a royalty.

2. The amount of the royalty shall be determined by the Minister of Culture. It may not exceed 50 per cent of the rate of remuneration usually paid to authors in accordance with current contracts or practices.

Article 158. Allocation of royalties.—1. The royalties provided for in the previous paragraph shall be distributed as follows:

(a) collection without arrangement or personal input: 50 per cent to the person who carried out the collection, 50 per cent to the approved collective management society;

(b) collection with arrangement or adaptation: 75 per cent to the author, 25 per cent to the approved collective management society.

2. Sums paid to the collective management society shall be used for social and cultural purposes.

Article 159. Proceedings.—In the event of illegal exploitation of folklore or of works that have fallen into the public domain, the State Judicial Officer, at the request of the Minister of Culture, shall have the capacity to take legal action. The infringement seizure proceedings provided for in Articles 131 et seq. of the present Law shall apply.

Article 160. Penalties.—The illegal exploitation of folklore or of works that have fallen into the public domain shall be punishable by a fine equal to 500,000 CFA francs, without prejudice to the damages that may be allocated to the civil claimant.

In the fourth group of countries, lawmakers have created *sui generis* regimes governing traditional knowledge. Examples include the Indigenous Peoples Rights Act of the Philippines and Guatemala's Cultural Heritage Protection Act.⁷

For the most part, these rules only apply within the countries setting them. The net result is that, globally, the treatment of traditional knowledge varies radically by jurisdiction, and the governments of nations from which traditional knowledge is taken have little or no power to control uses of that knowledge in other nations. In this respect, the law governing traditional knowledge today resembles the law governing patents and copyrights in the mid-nineteenth century, when each country set the rules applicable in its own territory—and, in shaping those rules, typically favored its own citizens and incorporated locally dominant ideologies.

7. Act to Recognize, Protect and Promote the Rights of Indigenous Cultural Communities/Indigenous Peoples, Creating a National Commission on Indigenous Peoples, Establishing Implementing Mechanisms, Appropriating Funds Therefor, and for Other Purposes, Rep. Act 8371 (Oct. 29, 1997) (Phil.); Decreto Numero 26-97 y sus reformas, Ley para la Protección del Patrimonio Cultural de la Nación (Guat.) http://www.wipo.int/wipolex/en/text.jsp?file_id=235791 [<https://perma.cc/KD9N-JK2Q>]; Indian Arts and Crafts Act of 1990, 25 U.S.C. § 305 (2012).

International Systems

During the past forty years, advocates of enhanced legal protection for traditional knowledge have frequently sought through regional or multilateral agreements to strengthen and harmonize the rights of indigenous groups and to expand the geographic reach of those rights. Some of those efforts have borne fruit. The principal examples are listed in the following chart.

Date adopted	Organization	Agreement
1967	Berne Convention, Stockholm Conference	Berne Convention section 15(4) ⁸
1976	WIPO, UNESCO, Tunisia	Tunis Model Law on Copyright for Developing Countries ⁹
1977; 1999	Organisation Africaine de la Propriété Intellectuelle	Bangui Agreement ¹⁰
1982	WIPO and UNESCO	Model Provisions for the Protection of Expressions of Folklore ¹¹
2001	UNESCO	Universal Declaration on Cultural Diversity ¹²
2007	United Nations	Declaration on the Rights of Indigenous Peoples ¹³
2010	African Regional Intellectual Property Organization	Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore ¹⁴
2010	Convention on Biological Diversity	Nagoya Protocol on Access and Benefit-Sharing ¹⁵

8. Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as amended Sept. 28, 1979, WIPO Lex No. TRT/BERNE/001, <http://www.wipo.int/wipolex/en/details.jsp?id=12214> [<https://perma.cc/BQP7-N2V5>].

9. UNESCO & WIPO, TUNIS MODEL LAW ON COPYRIGHT FOR DEVELOPING COUNTRIES (1976), <ftp://ftp.wipo.int/pub/library/ebooks/historical-ipbooks/TunisModelLawOnCopyright/TunisModelLawOnCopyright.pdf> [<https://perma.cc/MW3S-5RWB>].

10. Bangui Agreement Relating to the Creation of an African Intellectual Property Organization, Constituting a Revision of the Agreement Relating to the Creation of an African and Malagasy Office of Industrial Property art. 46, Mar. 2, 1977, WIPO Lex No. TRT/OA002/003 http://www.wipo.int/wipolex/en/other_treaties/details.jsp? treaty_id=227 [<https://perma.cc/XG3H-MEPM>]; Agreement Revising the Bangui Agreement of March 2, 1977, on the Creation of an African Intellectual Property Organization, Feb. 24, 1999, WIPO Lex No. TRT/OA002/002, http://www.wipo.int/wipolex/en/other_treaties/text.jsp? doc_id=13288&file_id=181151 [<https://perma.cc/ZE97-YF4L>].

11. UNESCO & WIPO, MODEL PROVISIONS FOR NATIONAL LAWS ON THE PROTECTION OF EXPRESSIONS OF FOLKLORE AGAINST ILLICIT EXPLOITATION AND OTHER PREJUDICIAL ACTIONS (1982), <http://www.wipo.int/edocs/lexdocs/laws/en/unesco/unesco001en.pdf> [<https://perma.cc/KTT5-KUJA>].

12. UNESCO 31 C/Res. 25, UNESCO Universal Declaration on Cultural Diversity, annex I, art. 9 (Nov. 2, 2001), <http://unesdoc.unesco.org/images/0012/001246/124687e.pdf#page=67> [<https://perma.cc/X5SA-LRNG>].

13. U.N. Declaration on the Rights of Indigenous Peoples, U.N. Docs. A/RES/61/295 (Sept. 13, 2007), http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf [<https://perma.cc/W2EC-KATN>].

14. Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore, Aug. 9, 2010, WIPO Lex No. TRT/AP010/001, http://www.wipo.int/wipolex/en/other_treaties/text.jsp? doc_id=150520&file_id=201022 [<https://perma.cc/H6LK-J65L>].

15. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity art. 1, Oct. 29, 2010, 1760 U.N.T.S.

Most of these agreements fell short of the aspirations of their sponsors. Some of them were signed, ratified, or implemented by too few countries. Others failed to specify adequately the kinds of knowledge to which they applied. Others did not clearly identify the groups or public authorities to which the rights they created would attach or how to determine which rights would be assigned to which entities. Finally, many lacked sufficient teeth to ensure compliance by signatory countries.¹⁶

However, the most recent of the agreements—the Nagoya Protocol—is neither vague nor toothless and thus merits further attention. The primary objective of the Protocol is to promote “the fair and equitable sharing of the benefits arising from the utilization of *genetic resources*”¹⁷. The secondary objective is to ensure equitable sharing of the benefits of “genetic resources that are held by indigenous and local communities” and “traditional knowledge associated with” those resources.¹⁸

In brief, the latter dimension of the Protocol works as follows: a member country must adopt national legislation to ensure that such resources and knowledge located within its own territory are accessed only “with the prior and informed consent and approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.”¹⁹ All other countries adhering to the Protocol are obliged to adopt national legislation—reinforced by appropriate penalties—ensuring that such resources and knowledge are “utilized” within their own jurisdictions only if the “domestic access and benefit-sharing legislation or regulatory requirements” adopted by the source country have been properly observed.²⁰

To illustrate: Namibia, a signatory to the Protocol, recently adopted legislation that, once fully implemented, will require companies seeking access to genetic resources and accompanying traditional knowledge in Namibia to obtain prior informed consent of the

79; see also *The Nagoya Protocol on Access and Benefit-Sharing*, CONVENTION ON BIOLOGICAL DIVERSITY, <https://www.cbd.int/abs/> [<https://perma.cc/764V-34SZ>] (explaining the Nagoya Protocol).

16. See Justin Hughes, "Traditional Knowledge, Cultural Expression, and the Siren's Call of Property," *San Diego Law Review* 49 (2013): 15-24.

17. Nagoya Protocol, *supra* note 15, art. 1 (emphasis added).

18. *Id.* art. 5, 7. As David Smith and his colleagues explain:

In order to achieve this, Parties will provide on the ABS Clearing House (<https://absch.cbd.int/>) records of the relevant legislation or other regulatory requirements, including where access provisions apply, and they will designate an ABS National Focal Point (NFP) to provide information and a Competent National Authority (CNA) to provide PIC and the necessary permits. When a permit or equivalent is issued, the CNA will publish this (without confidential content) as an Internationally Recognized Certificate of Compliance (IRCC) on the ABS Clearing House. Parties will also monitor utilization within their jurisdiction by designating checkpoints to determine whether genetic resources being utilized have been accessed in accordance with PIC and whether MAT have been established, and they will place reports of utilization on the ABS Clearing House as Checkpoint Communiques.

David Smith et al., "Explanation of the Nagoya Protocol on Access and Benefit Sharing and Its Implication for Microbiology," *Microbiology* 163 (2017): 290.

19. Nagoya Protocol, *supra* note 15, art. 7.

20. *Id.* art. 16. For a helpful summary of the mechanics of this system, see JEROME S. REICHMAN, WHY THE NAGOYA PROTOCOL TO THE CBD MATTERS TO SCIENCE AND INDUSTRY IN CANADA AND THE UNITED STATES 7–8 (2018), <https://www.cigionline.org/sites/default/files/documents/Paper%20no.158web.pdf> [[http://perma.cc/WMS8-SQ7W](https://perma.cc/WMS8-SQ7W)].

groups holding such knowledge.²¹ The European Union has ratified the Protocol and has adopted regulations fulfilling its responsibility to enforce access restrictions in other ratifying countries.²² In addition, some of the members of the European Union (such as Germany) have also ratified the Protocol and adopted domestic implementing regulations.²³ The net effect is that a company that engages in bioprospecting in Namibia without the permission of the relevant indigenous group would be subject to serious sanctions in Germany (up to 50,000 Euros for each offense) if it sought to commercialize there a compound derived from that bioprospecting.

The coverage of the Protocol is as yet uneven. Even in the signatory countries, it is far from fully operational. As of this writing, 104 nations have ratified the Protocol,²⁴ but only a subset of them have adopted local legislation either restricting access to genetic resources and accompanying knowledge or punishing “utilization” in their own jurisdictions of resources and knowledge acquired in violation of access restrictions in the country from which they were taken.²⁵ The United States has not joined either the Convention on Biological Diversity or the Protocol—and it is not likely to do so in the near future.²⁶

21. See Absalom Shigwedha, "Namibia Passes Bill on Use of Genetic Resources," *Namibian*, May 11, 2017.), <http://allafrica.com/stories/201705110836.html> [https://perma.cc/APV5-YXBN].

22. See Regulation 511/2014 of Apr. 16, 2014, art. 1, 2014 O.J. (L 150) 57, 59 (EU); Commission Implementing Regulation 2015/1866 of Oct. 13, 2015, art. 1, 2015 O.J. (L 275) 58, 4 (EU).

23. See Bruce S. Manheim, Jr., *Freedom to Utilize Genetic Resources? The Nagoya Protocol Two Years Later*, INTELL. PROP. WATCH (Oct. 24, 2016), <https://www.ip-watch.org/2016/10/24/freedom-utilize-genetic-resources-nagoya-protocol-two-years-later/> [http://perma.cc/XV3Y-MH4A].

24. See *Parties to the Nagoya Protocol*, CONVENTION ON BIOLOGICAL DIVERSITY, <https://www.cbd.int/abs/nagoya-protocol/signatories/default.shtml> [https://perma.cc/XK3U-8G8S].

25. For current information concerning the status of the implementation initiatives, see *The Access and Benefit-Sharing Clearing House (ABSCH)*, CONVENTION ON BIOLOGICAL DIVERSITY, <https://absch.cbd.int> [https://perma.cc/6TWD-Y4RE].

26. Nevertheless, many academic and research organizations in the United States have undertaken efforts to comply with the regulations adopted by the member countries of the Protocol. See Kevin McCluskey et al., *The U.S. Culture Collection Network Responding to the Requirements of the Nagoya Protocol on Access and Benefit Sharing*, MBIO, July/Aug. 2017, at 1 (2017), <http://mbio.asm.org/content/8/4/e00982-17.full> [http://perma.cc/SD49-YTUH].

Perspectives

Joseph Wekundah, “Why Protect Traditional Knowledge” (2012)

For indigenous people, the rationale for protecting traditional knowledge centres on questions of fundamental justice and the ability to protect, preserve, and control one's cultural heritage. There is also the concomitant right to receive a fair return on what these communities have developed. Many areas of Traditional Knowledge have potentially lucrative applications as shown above.

Even non-indigenous people also have a strong incentive to ensure that fair use of TK is ensured because it has much to offer the modern society. It is increasingly being used to assist policy making in many areas: food and diversity; health, trade and economic development. On this basis there are five reasons why TK should be protected; these are: Equity, Conservation of biodiversity, preservation of traditional practices, prevention of biopiracy, and importance of TK in development.

Equity

TK generates value that is currently inadequately recognized and compensated. Traditional farmers, for example, have nurtured, conserved and used both plants and animals. They have improved the value of plant genetic resources through continuous selection of the best adapted varieties. Seed companies then collect the varieties, process and produce for sale. They are even allowed to protect the varieties through Plant Breeders Rights and can benefit from them while the farmers are left out. Farmers and Scientists thus rely on the genetic diversity present in crop plants that in hundreds of generations were accumulated, observed, selected, multiplied, traded and kept variants. The whole irony is that scientists can protect and benefit from their innovations whereas the traditional farmers contributions are overlooked. Farmers did not charge for the samples that the scientists and seed companies took, hence the inequality inherent in the current system of intellectual property rights.

Conservation of Biodiversity

Knowledge innovations and practices of indigenous peoples and local communities are a show of their cultures. Protection of people's culture therefore entails preserving the link between the people and natural features including plants and animals. Protection of TK can therefore, help conserve the environment and promote sustainable agriculture and food security.

Preservation of Traditional Practices

Protection of TK can provide a framework for maintaining practices and knowledge embodying traditional lifestyles. Preservation of TK helps to preserve the self-identification of people and can ensure the continuous existence of indigenous and traditional people.

This role is certainly beyond the scope of IPRs protection foreseen in TRIPS or any other multilateral instruments. The protection of TK through appropriate form of IPRs can raise the profile of the knowledge and make it more attractive and worthy of preservation.

Prevention of Biopiracy

A Large number of patents have been granted on genetic resources and knowledge obtained from Africa and other developing countries. An example is the use of patent number 5, 401, 5041 granted for wound healing properties of turmeric acid. The innovation had been used in India for centuries prior to the registration of the patent by USA. The Council of Scientific and Industrial Research (CSIR) from India successfully applied for its revocation. Kenya's kiondo was patented in Japan but this has not been revoked, same has been with the micro-organism for fading jeans, and the energy saving jiko just to mention a few cases.

A major concern is on how to prevent misappropriation of TK. Three suggestions have been advanced: documentation of TK with a view of establishing a TK digital library. This will enable states to check the possible misuse; the requirement of proof of origin for materials to be patented; and prior informed consent.

The Use and Importance of TK in Development

There is need to protect TK against loss and misappropriation. Some form of protection may make local communities willing to part with their TK and genetic resources. Thus if knowledge owners are compensated, they would be motivated to provide easy access to their TK. Moreover, they may be encouraged to conserve it and ensure future use and access. Concerning Traditional Medicine, if IPRs are used for protection, they may reduce access to products and treatment which are essential for a community. Government may therefore consider promoting the use of TK and also attempt to prevent misappropriation.

Waziyatawin, “Indigenous Knowledge, Anti-Colonialism, and Empowerment”

(2010)

<http://www.ideas-idees.ca/blog/indigenous-knowledge-anti-colonialism-and-empowerment> [https://perma.cc/K4TQ-9XMY]

Indigenous knowledge recovery is an anti-colonial project. It is a project that gains its momentum from the anguish of loss of what was and the determined hope for what will be. It springs from the disaster resulting from the centuries of colonialism’s efforts to methodically eradicate our ways of seeing, being and interacting with the world. At the dawn of the 21st century, the recovery of Indigenous knowledge is a conscious and systematic effort to revalue that which has been denigrated and revive that which has been destroyed. It is about regaining the ways of being which allowed our peoples to live a spiritually-balanced, sustainable existence within our ancient homelands for thousands of years.

In privileging writings about current work in Indigenous knowledge recovery, we are challenging the powerful institutions of colonization which have routinely dismissed alternative knowledges and ways of being as irrelevant to the modern world. As Indigenous Peoples and other advocates of Indigenous knowledge have typically been denied access to the academic power structures which legitimize knowledge production, those of us with access to those structures must work to support Indigenous knowledge recovery efforts for our own purposes.

Rather than engaging this issue simply as an ‘intellectual property’ exploit, the goal of Indigenous scholars working in this area is to discuss Indigenous knowledge in the broader context of Indigenous empowerment. Indigenous knowledge is meaningless and actually harmful if its holders and practitioners are not simultaneously empowered and supported in efforts to not only survive – but also thrive.

The process of colonization required the complete subjugation of our minds and spirits, in addition to our physical subjugation, so that our lands and resources could be robbed from underneath our bodies.

Ngugi wa Thiong'o describes the largest weapon of imperialism as the cultural bomb: “The effect of a cultural bomb is to annihilate a people’s belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity, in their capacities and ultimately in themselves.” Indeed, through the combined efforts of government institutions and Christian workers, Indigenous Peoples in the United States and Canada faced severe persecution for practicing our spirituality, for speaking our languages, and for attempting to live the way our ancestors before us had lived. The federal boarding and residential schools continued this tradition, aiming their most concerted and brutal assaults on our most vulnerable and precious populations: the children. While the devastation wrought from these assaults was not totally complete, it has been sufficiently thorough to severely disrupt our ways of living and to cause us to question the usefulness and importance of the ways of life given to us.

We were taught that the conquest and “civilizing” of our people was inevitable; that we too must give way to “progress.” It was hammered into our heads that our Indigenous cultural traditions were inferior to those of Euro-Americans and Euro-Canadians, that there was nothing of value in our old ways, and that those ways were incompatible with modernity and civilization. But they really meant something different.

In order for the colonizers to complete their colonizing mission, they were required to not only make themselves believe these ideas, they were also required to make us – the colonized – believe them.

In one way they were correct; within the confines of colonialism our ways were irrelevant and incompatible. Indigenous traditions are of little value in a world based on the oppression of whole nations of people and the destructive exploitation of natural resources. Our values and lifeways are inconsistent with the materialism and militarism

characteristic of today's world powers. In this world that colonialism has created, there is no place for Indigenous knowledge. When Indigenous Peoples were taught the worthlessness of our traditions and knowledge, it was designed to perpetuate the colonial machine. If Indigenous cultural traditions were deemed to be on equal ground with the colonizer's traditions, colonialist practices would be impossible to rationally sustain. Unless they were willing to complete a project of complete extermination, their sense of peace required the muting of Indigenous voices, the blinding of Indigenous worldview, and the repression of Indigenous resistance.

However, within a broader context, we know these ideas about Indigenous ways of life to be false. At any point in history, we could have worked jointly towards conditions that would facilitate the return of Indigenous ways of being while appreciating the knowledge that supported those ways. Even now this is not an impossible task. The same human beings who created the conditions of this world also have the capacity to change it. In telling us we must change and adapt, they really meant that the old ways must end because they were unwilling to change their colonizing ways. They were unwilling to end their occupation of our homelands; they were unwilling to foster the restoration of the plants and animals indigenous to our homelands; they were unwilling to discontinue their exploitation and destruction of all that we cherished; and they were unwilling to let us retain the knowledge of alternative ways of being. Because the colonizers wanted to continue colonizing, we had to change and our way of life had to be destroyed. So goes the nasty business of empire building.

The legacy of this colonizing objective is frequently parroted by Indigenous Peoples – even by some academics – who have obediently learned to restrict their own vision according to the parameters set for us by our colonizers. Fortunately there have always been those among us who understood the political motivations behind their thinking, who held fast to the original directions given specifically to our ancestors, and who resisted colonization by carrying that knowledge into the present. There is a growing number of Indigenous people and non-Indigenous allies who have seen the fallacy of Euro-American and Euro-Canadian self-purported superiority and who have complete faith in the ways of life that sustained us for thousands of years. In fact, many of us even go so far as to suggest that eventually these ways may resolve some of the global crises facing all populations today.

However, before knowledge of these ways of being and interacting with the world can be shared, as Indigenous Peoples we must first work on recovering these traditions among our own populations.

While decolonization ultimately requires the overturning of the colonial structure, that must be initiated by the colonized. As I have argued elsewhere, "The recovery of Indigenous knowledge is deeply intertwined with the process of decolonization because for many of us it is only through a consciously critical assessment of how the historical process of colonization has systematically devalued our Indigenous ways that we can begin to reverse the damage wrought from those assaults."

The revaluing of our traditional knowledge has to begin in our own communities among our own people, not only because we are the major holders of the knowledge and the major impetus for decolonization begins there, but also so that we can prevent that knowledge from being appropriated by the colonial system.

Stephen Munzer and Kal Raustiala, “The Uneasy Case for Intellectual Property Rights in Traditional Knowledge”
27 Cardozo Arts & Entertainment Law Journal 37 (2009)

1. Desert Based on Labor

A principle of desert based on labor finds favor among some philosophers of property. As often expounded, a labor-desert principle is merit-based. It conceives of persons as agents who, by their actions, deserve or merit something as a result. If property rights are deserved, their scope and strength must somehow be commensurate with the labor that grounds them. This principle is often invoked, with limited and variable success, to support property rights in land, moveable goods, inventions, and works of literature and art. Of course, desert is not conceptually tied to individuals, for sometimes we ascribe desert to groups: for example, that the University of Kansas Jayhawks deserved to win the 2008 NCAA basketball championship because they were talented, trained hard, played well, and never gave up. One cannot, therefore, rule out desert-based claims to TK by an indigenous people on conceptual grounds. But if a labor-desert principle is pressed into service for TK, its justificatory force is distinctly limited. Perhaps the originators, or the group of originators, of the TK deserve rights in it, but they are long dead. It is hard to see why their remote descendants should deserve an IP right in TK that they did not originate.

Some might object that other forms of property, such as property in land, routinely pass to future generations. But careful expositions of labor-desert theory stress that desert alone does not support an unrestricted power to transfer property to others. Some philosophers, for example, argue that inheritance should be restricted. Others contend that a labor-desert principle, as applied to land and moveable goods, justifies broad powers to transfer only if whatever constraints apply to original acquisitions continue to be satisfied, and that steep taxes on gratuitous transfers (gifts, bequests, and intestate succession) are in order.

Multi-principle (pluralist) theories of property that include targeted appeals to utility or efficiency as well as a labor-desert principle can help to justify a power to transfer full ownership. For instance, appealing to the advantages to and preferences of both buyers and sellers of land helps to show that what Anglo-American property lawyers call a fee simple absolute, or full ownership, conduces to a useful, smoothly-functioning system of land transfer. By itself, a labor-desert principle can support no such system. It is, therefore, no surprise that the economically-inclined argue that efficiency undergirds a limited number of types of property rights, of which a fee simple absolute would be the most conspicuous.

Thinkers have yet to consider whether such philosophical and economic arguments can show that remote descendants of originators or unrelated later inhabitants of a region

should have an IP right in TK that they never originated. Later we take up such arguments under the headings of incentives to innovate or commercialize and the prevention of confusion.

In any event, it is difficult to show that desert justifies robust IP rights in any particular item of TK. Consider a 300-year old tribal dance. An indigenous people should be able to exercise a liberty-right and power to keep the dance secret. But suppose that outsiders witness the dance with the permission of the group. The outsiders imitate the dance and describe it choreographically to others. The tribe did not explicitly give or withhold permission to imitate and describe the dance. Quite strong IP protection may not be commensurate with the desert of the indigenous group: it may be commensurate with the desert of the originators, but they are, almost by definition, long dead.

That said, it may be that the existing group should be entitled to prevent individual members from granting access to the traditional dance. The group could then do so by exercising its power to nullify individual grants of access, its power to make rules that bind others, and its limitation on members' liberty-right and power to grant access. It may also be that the indigenous group should have a claim-right to their folkloric dances with a correlative duty on outsiders whose breach triggers damages, royalties, or other forms of relief. The group could then invoke its claim-right to all aspects of its folklore, its claim-right to receive just compensation for permitting access to the dances, its power to obtain various remedies for a wrongful failure to pay just compensation, its power to exempt folkloric works such as dances from the usual copyright requirement of fixation in a tangible medium, and finally its power to prevent others from describing the dances to outsiders. ...

2. Firstness

In light of Lawrence C. Becker's well-known distinction between general, specific, and particular justifications, arguments from firstness surface in at least three different ways as a defense of property. A general justification grounds an explanation of why there should be any rights of property, of whatever kind, at all. A specific justification grounds a given kind of property, such as land ownership. A particular justification grounds a decision as to which person or other entity owns an item of property, say, that Travis Eppes owns the Lazy-E Ranch in Texas.

Some might say that firstness supports the general institution of property or at least specific types of property. Yet it is widely agreed that firstness by itself does not work well as a general or specific justification. The last way is as a justification for who should have property rights in a given thing, or particular justification. This way presupposes that other underlying justifications for property rights have already proved sound. In property law, firstness sometimes functions as a particular justification when disputes over desert or incentives prove very difficult or costly to decide on other grounds. Assigning a property right to the party who was "first" promotes order because often priority can be determined even when other things cannot. Thus, property rights to a wild animal might be given to the first person who captures it, and property rights to land might be granted to the first

person who occupies the land and makes productive use of it. Lurking in this thinking may be some form of a desert claim, for granting ownership to those who are second might equally promote order (though doing so could create some perverse incentives).

While some proponents of TK rights talk of the "dispossession" of indigenous peoples' TK, that term is inapt. Assume that the San ("bushmen") were the first to identify the appetite-suppression effects of ingesting the Hoodia gordonii plant. Once Westerners came to know of these effects, that in no way diminished the understanding or skill of the San and hence did not dispossess them of their knowledge. Those who work in the field of dispossession theory are correct that Western colonialists often deprived indigenous peoples of their land, gold, silver, and artifacts, for these items are rivalrous, i.e., cannot usually be possessed and used by multiple parties at the same time. TK, as a form of understanding or skill, is nonrivalrous; many parties can possess and use it at the same time. The knowledge embedded in patents, trade secrets, and copyrighted works of nonfiction is also nonrivalrous.

Some theorists of property rights contend that Lockean justifications, which are often identified or associated with firstness, support strong property rights in, for example, inventions, songs, and literary works. The basic argument runs: I own myself; therefore I own my labor; therefore I own whatever my labor produces; therefore, if I invent a diagnostic test for breast cancer, or if I write the great American novel, I own a patent on the test or a copyright on the novel.

However, others argue against Lockean justifications of exclusive control over access to and the use of intellectual works. Seana Shiffrin, for example, contends that there is a Lockean presumption against natural, private rights over IP. Although Shiffrin identifies different understandings of the "intellectual commons," her argument presumes that "initial common ownership applies to intellectual property." We question this presumption on the ground that many intellectual commons are open-access resources rather than owned in common. n74 For open-access resources, arguments sounding in firstness have some bite. For resources owned in common, arguments invoking firstness would be harder to make.

Even if firstness gives some purchase to rights in TK, it appears that the remote-descendant critique of a labor-desert justification has a parallel critique of a firstness justification. Suppose that ancestors of a current-day indigenous people first came up with an elaborate dance 300 years ago. It is difficult to see why their remote descendants ought to have TK in the same dance based on firstness. The descendants were not the first to invent the dance.

One way to question this critique is to find incremental changes in the dance over time and focus on changes introduced by the present generation. First, given that the original dance was elaborate, perhaps those who invented it three centuries ago borrowed elements of the dance from their ancestors or even from other groups or indigenous peoples. If so, we must somehow discount the firstness of the assertedly original dance. Second, to appeal to incremental changes would entitle the present generation solely to the incremental changes they wrought. These changes may or may not be very important. In any event, they would not yield a right over the entire dance. Third, as the foregoing points suggest, inquiries into

firstness are apt to be highly fact-specific. Their results might be indeterminate and difficult to ascertain in a legal proceeding. For instance, without drawings or datable written choreography, it would be hard to show the history of a 300-year-old dance at twenty-five-year intervals.

More interesting is the claim that the remote-descendant critique misfires because an indigenous people is a unitary group or collectivity over time. The idea is that the people responsible for the hypothetical dance form a group of n generations who speak pretty much the same language and have highly similar if evolving mores, practices, and ways of life over three centuries. It is the group, rather than the individuals included in the group, that possesses the claim of TK, and the group transcends its current membership.

This claim is interesting because it pushes us to think about the identity-conditions of transtemporal groups. The idea embedded in the claim suggests, in effect, two conditions: lineage and cultural continuity. Assume that we adopt this suggestion and regard these two conditions as singly necessary and jointly sufficient for transtemporal group-identity.

What, if anything, follows about TK from this assumption? On the one hand, it seems to weaken the remote-descendant critique of firstness. On the other hand, firstness alone seems insufficient for specific or particular justification of control over ancient dances. Standard IP law justifies copyright in dances based on other factors, such as utility or moral right. Firstness can be helpful when two claimants exist for a given dance (particular justification). It does not ground IP rights on its own (specific justification). The transtemporal group claim also fails to establish why the TK right in the dance ought to extend indefinitely. Copyrights, for example, are time-limited so as eventually to place human expressions in the public domain, and thereby permit others to build upon them in new creations. Although copyright's duration in some common law systems has expanded in recent decades, it is not indefinite precisely because of the need to balance private property rights against the public interest. To grant a TK right in a dance to a transtemporal, perhaps long-enduring, group would subvert this public-domain rationale for temporal limitation in IP rights. Again, we need some compelling ground on which to distinguish dances subject to the proposed TK rule from those subject to the ordinary, time-limited copyright rule.

3. Stewardship

Recently, Kristen A. Carpenter, Sonia K. Katyal, and Angela R. Riley proposed a "stewardship" theory of property with respect to the cultural property claims of indigenous groups. For them cultural property falls into three categories: tangible, intangible, and real. Intangible cultural property is roughly equivalent to IP in the broad range of traditional knowledge, though their examples, unlike ours, are mainly of Native American TK. They contrast the stewardship theory with the law's dominant "ownership" theory of property. They claim that the latter better promotes the property rights of individuals, whereas the former better promotes the interests of peoples, especially indigenous peoples. It does so, they suggest, because the "peoplehood" of indigenous groups makes them the proper

stewards of their cultural property. We address their views only insofar as they relate to the legal protection of TK.

An immediate difficulty with their approach is whether the stewardship theory is subsumable under the ownership theory rather than a separate theory standing alongside, and in contrast with, the ownership theory. In relevant ordinary usage, a steward is "one called to exercise responsible care over possessions entrusted to him." One might well think, then, that stewardship falls nicely under ownership. Someone who owns property entrusts it to another - the steward - who has to exercise responsible care over the property. Furthermore, the steward seems to have only those rights and responsibilities specified by the owner. It hardly seems that someone who does not own the property could appoint herself or another as steward over the property.

But let us waive this difficulty about the nature of stewardship. Assume instead that the ownership and stewardship stand alongside each other as independent theories. Assume further that an indigenous people can appoint itself steward over its own TK. If there are competing claims of stewardship, it is not evident how the law should adjudicate among them. Do others have to recognize and abide by this self-appointed stewardship? Could Ansel Adams have appointed himself steward over the natural scenes he photographed or John Muir have appointed himself steward over the mountains he hiked across and chronicled, on the ground that each best understood the value of these natural scenes and mountains, respectively? Could Jewish people appoint themselves stewards of klezmer, or African Americans appoint themselves stewards of jazz?

To answer yes to each of these questions would, again, dramatically upend the existing IP system and create a vexing set of challenges related to the allocation and distribution of rights of stewardship. Among those challenges are the accommodation of an overlay of stewardship rights on existing public and private property rights (for instance, allowing rock climbing in a National Park despite the sacredness of the site to an Indian tribe). To answer no to each of these questions but still to claim that indigenous peoples are the self-appointed stewards over their own TK appears to be unjustified indigenous exceptionalism. For it remains unclear why non-indigenous groups lack a "peoplehood" of their own that can conflict with the peoplehood of indigenous groups.

Our critique of the stewardship theory underscores two points that we develop further below. First, robust TK protection is in great tension with many core principles of the existing IP system; it is not merely something that can be tacked on as a new right. Second, TK protection aimed solely at indigenous groups requires a compelling theory of discrimination between indigenous and non-indigenous claims.

4. Stability

A significant class of utilitarian arguments for property rights invokes stability, security of expectations, and the smooth functioning of society and the economy. One can find arguments of this sort in the great early utilitarian thinkers such as Hume and Bentham. These arguments need not be uniquely utilitarian, as the writings of Aristotle and Hegel

make plain. Advocates for TK make similar arguments today, though it is unclear whether they would always label them utilitarian justifications for IP rights in TK.

The WIPO Composite Study on the Protection of Traditional Knowledge, for example, argues along these lines, which it conceives of as "reasons for IP protection of TK." This WIPO document claims that "a clear, transparent and effective system of TK protection increases legal security and predictability to the benefit not only of TK holders, but also of society as a whole, including firms and research institutions who [sic] are potential partners of TK holders." We agree that having clear, transparent, and effective legal rules is important. To agree to that says little about the content of the rules. If, for instance, a legal system contained rules that excluded IP protection for TK, the interests of legal security and predictability might be equally well promoted. The Composite Study makes a related argument about transaction costs: They will increase because of "the lack of a transparent system for the protection of TK" stemming from "uncertainty" pertaining to access to "biodiversity and related TK." This argument fails for the same reason as its predecessor: transparent legal rules that exclude IP protection for TK would also eliminate uncertainty and thereby decrease transaction costs, including information costs, of gaining access to TK. The WIPO document offers no compelling reason to favor one choice over the other.

Next, says the WIPO Composite Study, protection for TK would advance economic development and alleviate poverty. The IP rights would be intangible assets "transformed . . . into capital" and thus used as "collateral security for giving traditional communities facilitated access to credit." This argument has some appeal, but its soundness turns on empirical assumptions that the Composite Study does not explore. It is one thing to create IP rights in TK. It is another for these rights to have financial value as capital or collateral security. We do not claim that the TK-capital argument is unsound, only that its soundness depends on some sanguine, perhaps heroic, empirical assumptions about which IP rights will turn out to be valuable. Our skepticism is in no way peculiar to IP rights in TK. Most patents have little financial value. Similarly, the financial value of most copyrighted works is close to zero.

5. Moral Right of the Community

This argument takes its start from the idea of the moral right of the author or creator in civil law systems and transmutes it into a community right. The legal literature speaks of both "moral right" and "moral rights." The singular expression is closer to the French droit moral and the German Urheberpersonlichkeitsrecht (literally, "originator's personality-right"). The plural expression indicates that this right, even if it is unitary in its philosophical foundation, is a basis for a range of different rights: of disclosure, of withdrawal and repentance, of identification (attribution), of preventing attribution to anyone other than the author, against misuse of the author's name, against alienation (transfer) or of restrictions on alienation, and of integrity (respect). Only some of these different "rights" are Hohfeldian claim-rights. Others are variously liberty-rights, powers, duties, liabilities, immunities, no-rights, or disabilities. Thus the expressions "moral right" and "moral rights" are terms of art. They apply not to just any or all moral rights, such as

the moral right not to be tortured, but to rights associated with authorship and invention that inspire much of civil law systems of intellectual property.

It is unnecessary to pursue here either the Hohfeldian parsing in detail or the differences between French and German law. It is important to notice two things. First, the underlying philosophical rationale for moral right(s) is contested. Often the rationale is traced to an idea of personality or personhood in the natural-rights tradition, with later contributions from Kant, Fichte, and Hegel. But there are antecedents in Roman and medieval thought and plenty of contributions by late-nineteenth and twentieth century thinkers. There are also tributaries from sovereign protection ("privilege") for authors during the Renaissance and the Reformation. It is far from evident that any of these tributaries flows naturally to IP rights in TK. Second, moral rights are chiefly noneconomic in nature. Economic rights in creative works are protected by copyright and other means. Thus, moral rights, at least as understood until early in the twentieth century, were individualistic rights rooted in personality or personhood.

In the 1920s, this view of moral rights began to change, at least in some civil law systems. Scholars drew attention to the social gestation of authorship, focused on the protection of the work as such, and sometimes stressed the author's duty to protect the work. The "romantic" notion of authorship was, in some nations, giving way to the social womb from which authors brought forth their works. These changes were most evident among German scholars and German law. A piece of draft legislation by the Academy for German Law, produced for the Nazi government in December 1938, preferred the term Urheberehre ("authorial honor") over the earlier Urheberpersonlichkeitsrecht, and the relevant body of law was now Urheberrecht ("authorial right" or moral right). French scholarship and law, meanwhile, hewed more closely to individualistic understandings of moral right(s). Contemporary French and German laws on moral right(s) differ from each other and from the state of affairs in the 1930s, partly because of later treaties, especially the Berne Convention as revised in 1948 (Brussels), 1967 (Stockholm), and 1971 (Paris) and amended in 1979. None of these developments went so far as to say that socially-embedded authors were communities, or that many people together could be a group author. Still, the socially-informed conception of authorship is more congenial to the-group-as-author than the individualistic understanding of moral rights. Could what the-group-as-author creates be TK?

To speak of a moral right of the community to its TK is congenial to the idea of a group right. Some TK, of course, involves native plants, and insofar as no improvements are made - for instance, by cross-breeding - the group cannot claim credit for the plants themselves. Of course, a neem tree standing alone has no impact on human health, but learning how to use oil from the neem tree medicinally requires study and skill. Here the case is stronger. And it is arguably even stronger for folklore and art, because medical knowledge usually reflects the group's "personality" less clearly than do its folklore and art. The case for TK is rather less strong for the biodiversity of an indigenous people's region, for usually its members have comparatively little to do with the emergence of native flora and fauna. They may, however, conserve, harm, or destroy these native resources. As for the genetic material, bodily fluids, and tissues of indigenous people, the matter is

contested, for both lawyers and philosophers disagree over whether persons should have property rights in parts of their own bodies or in patents related to their genes, cells, or tissues. In sum, though a moral right of the community in principle favors some group rights, which rights should be recognized with respect to the various items listed in Part II.B is open to dispute.

To be sure, one might question the jump from the moral right of an author to the community right of an indigenous group for its TK. The former, even if modified by a socially-informed view of the author, takes the "personality" or "personhood" of the author as central. The latter raises doubts. In what sense, if any, could a community have a "personality"? In what sense, if any, could one ascribe "personhood" to a community? Stereotypes are to be resisted in part because they subsume all members of a group under one image. We do not say that these questions lack non-stereotypical answers. However, we fail to see a clear path to satisfactory answers.

A different way of developing the argument from the moral right of the community suggests two possible reasons for making TK rights indefinite in duration. The first stems from a claim about the special nature of indigenous groups. Indigenous groups are said to face dire threats to their cultural vitality and thus may require special consideration in property rights. Native people, writes Rebecca Tsosie, "assert a right to control who can tell their stories and who can use their designs and symbols" as a way to protect their fragile identity. Second, the "author" and the moment of creation (or "fixation") of folklore such as the hypothetical 300-year-old dance are rarely identifiable. Without a *sui generis* IP right, the hypothesized dance-creating group would have no IP protection at all.

These claims have some persuasive power. But there is a powerful countervailing consideration: the importance of the intermixing of cultures and knowledge throughout human history. Standard accounts of TK often appear to take contact with Western colonialism as the magic time for fixing a group's TK. And certainly a moral-right argument works best if we imagine that an indigenous people has lived in roughly the same area for hundreds if not thousands of years and that its language, culture, and practices have remained largely constant. While this picture may be true for some indigenous peoples, it is clearly false for many others. For millennia human beings have spread out over the globe, whether by their own volition or through coercion. In the process they have intermarried with humans from other linguistic and cultural groups, absorbed some customs from others, and lost some of their own. The practices and know-how specific to TK are likewise varied, adapted, imposed, shared, borrowed, lost, and sometimes rediscovered. In this regard, Jeremy Waldron rightly stresses "the fluidity and porousness of cultural boundaries, the importance of mixture and fracture in cultural and national identities, [and] the significance of movement and migration in the human story (we are all the descendants of settlers)." These processes have accelerated in the last fifty years, though to what degree is an empirical question.

Blending of cultures is not, though, solely an empirical issue. It can also be a value to be celebrated and protected. As Kwame Anthony Appiah argues with regard to the preservation of cultures, there is a compelling "case for contamination," and too often "talk

of authenticity now just amounts to telling other people what they ought to value in their own cultural traditions." Seen in this light, the not infrequent mixing of cultural knowledge from different groups undermines the moral-right argument because this blending, to the degree it is present, makes the TK of each group less fully reflective of the group's own unique "personality." Moreover, as Appiah contends, there are good reasons to want to promote, not inhibit, such blending.

Even if one lays aside issues of cultural hybridization, however, the protection of TK based on group personality faces another problem. Across the span of history, every cultural group has possessed TK. Never before has this TK received IP protection in international law, or for that matter in the vast majority of national legal systems. This raises the question of why indigenous peoples' TK ought to receive legal protection that other groups' knowledge lacks. One answer is to extend TK protection to all folklore. Yet to do so illustrates the dramatic scope of the changes that would be wrought by extensive TK protection. To grant all groups their own indefinite group-related IP rights would be very difficult administratively, extremely expensive, and politically and legally disruptive. It would dramatically alter large parts of the IP system. Once again, it seems that some limiting principle - as yet insufficiently defended by TK advocates - would have to exist by which the IP rights of indigenous peoples could be hived off and radically differentiated from those of other groups.

Despite these concerns, the moral rights theory is not without payoff here. It does seem possible to justify a pair of narrow TK rights. One narrow liberty-right and/or claim-right would be disclosure (divulgation): to make an item of their TK known to the world and in this respect "public," but to retain the power to keep that item from being used in any way by others - and therefore out of the "public" domain in a different respect. Another, connected claim-right and power would be to prevent the attribution of an item of TK to any person or group other than the indigenous community that generated the item. Both of these rights would provide more protection for TK than currently exists, but would require only minor recalibration of the broader IP system.

6. Incentives to Innovate

Plainly, indigenous peoples did not need incentives in the form of modern IP rights to develop TK. From time immemorial groups of all kinds developed specialized knowledge and folklore. So the primary point of legal protection of TK now for indigenous peoples is to keep others from purloining their handiwork, which by definition is of long-standing. Among the protections sought might be the following: a claim-right to its TK; a power to create rules that bind others in regard to the copying or reverse-engineering of its TK; a claim-right to receive just compensation for granting access to its TK; a power to seek and a claim-right to have a wide range of remedies for others' failure to pay compensation or obtain informed consent; and lastly powers to modify otherwise applicable laws of patent and copyright. Without them, they lack control over their cultural products and thus, in the view of Tsosie and other advocates, lack control over their identity.

This desired protection, however, cannot be defended on the basis of an incentive to innovate. The innovation has already occurred; at most we might use incentives to justify possible incremental improvements to existing TK. Moreover, there is an important tension here between innovation and the focus on tradition and long-standing practice. The more a group innovates now with regard to shared knowledge or folklore, the less traditional it is and the more it seems like contemporary knowledge or innovation of the sort protected, or not protected, by standard IP rights. If one thinks of TK as a living tradition, and if that tradition has had a recent burst of innovation, then IP rights may be justified because of that innovation, but the traditional aspect of the TK plays a comparatively small role in the justification. The force of a claim for a new IP right - namely, a robust package of IP rights for TK - is weaker the more the focus of the right rests on innovation by living persons. By the same token, if incentives to innovate in the future are the issue, then standard IP rules will suffice, for in many legal systems the justification of patent, copyright, and trade secrets rests largely on incentives to innovate.

7. Incentives to Commercialize

A different incentive argument hinges on bringing TK to national and global markets. This argument is not vulnerable to the criticism that the innovation has already occurred; it looks forward to the commercialization of TK. To the degree TK is innovative and useful, it makes sense to encourage the further investments that will bring it to others.

This consequentialist argument has some force but also some limitations. First, the argument does not apply to specimens of TK that indigenous peoples want to withhold from outsiders. These specimens might include sacred rituals and artifacts and forms of TK tightly bound up with an indigenous people's sense of its own identity. Second, any plausible extent of legal protection will not include indefinite duration. Third, unless the extent of legal protection is exquisitely calibrated, and unless indigenous peoples know the extent of that protection - each of which is difficult to secure - they may well either under-invest or over-invest in commercializing their TK.

Over-investment is especially worrisome because it wastes the precious economic resources of already poor indigenous peoples. With TK, as with other forms of IP, over-investment can lead to either "rent-seeking" behavior or "rent-dissipating races," where a "rent" is a supra-competitive return from an asset (here, an item of TK) because legal protection of that asset shelters the asset from unhindered competition. These rent-related risks are found in many forms of IP and pose a more general policy problem. They may be especially acute in the case of TK because its underlying justification is disputed more than the underlying justifications of patents and copyrights, and because it is likely to be harder to calibrate the incentives to commercialize TK - much of which is not intended to be commercialized - than to calibrate the proper incentives to commercialize patented inventions and copyrighted works. Still, there is no necessary reason why incentives to commercialize could not ground some form of TK protection, subject to the caveats we have listed.

8. Unjust Enrichment, Misappropriation, and Restitution

Another argument for TK rests on the moral underpinnings of the law of equity, contract, and tort. Unjust enrichment is A's receipt of an economic benefit to B's detriment such that A's retaining it without paying B would be unfair. Misappropriation is an improper or dishonest form of unjust enrichment, as distinct from cases where A receives an economic benefit innocently or is unaware of the detriment to B. Restitution is, broadly, a basis for A's liability to B because of unjust enrichment and, narrowly, the payment A should make to B to remove the injustice. We underscore that the exposition of these legal concepts is rough and suffices only for our immediate purposes.

The WIPO Composite Study offers a version of this argument that points to the unjust enrichment of insiders, specifically manufacturers located in the country in which the TK originates. The argument goes like this. In light of TRIPs, many developing nations feel a need to set high standards for IP protection in order to further international trade. Such nations tend to be rich in biodiversity and TK. But it is difficult to craft and enforce high standards for protecting TK. In consequence, developing nations often fail to provide the infrastructure for IP protection of TK. As a result, there is "an unfair advantage for local manufacturers, since they do not need to compensate [the entity that ought to be] the IP right holder." If all else is equal, "foreign IP owners will be [at a] disadvantage vis-a-vis their local imitators." The absence of IP protection for TK, then, is tantamount "to non-tariff barriers to trade."

This argument, which sounds in a quasi-utilitarian understanding of unjust enrichment, is intriguing and perhaps even plausible. Yet this line of thinking illustrates the point that sometimes theory is cheap and empirical information is expensive. It is hard to assess the force of this hypothesis without empirical data on the effects of a non-existent TK-IP regime on local manufacturers, foreign manufacturers, indigenous peoples, and international trade.

We think that a more plausible version of the argument concentrates on the unjust enrichment of outsiders. The core is: indigenous peoples have a right to their TK such that, if the right is not protected, outsiders will be unjustly enriched at the expense of indigenous peoples. Sometimes outsiders use TK to develop patentable inventions or copyrightable works. But once they obtain patents and copyrights and receive income from them, they usually do not share even a portion of the income with the indigenous peoples who developed the TK. So the TK gives an economic benefit to outsiders to the detriment of indigenous peoples. It is unfair for outsiders to retain the full benefit without making an appropriate restitutive payment to the indigenous peoples. Let us call this payment a royalty.

The royalty argument is straightforward and poses comparatively few problems in principle. However, in practice calculating the amount of payment and figuring out who owes how much of it to whom will often be diabolically difficult. Consider once more the San and their TK in Hoodia plants. Some non-San indigenous peoples, such as the Damara and the Nama, also have Hoodia TK. Western-educated scientists, not the San, isolated the active ingredient in the plant. To what fractional shares are the San, the Damara, the Nama,

and the scientists entitled? Who pays them? Do the San receive their share as a group, or does it go to individual San and, if so, to which individuals? To be sure, patent and copyright royalties can involve multiple claimants as well. One thing that makes TK royalties harder to sort out is that some of the multiple claimants (San, Damara, Nama) can be hard to specify precisely because of intermarriage and migration. Moreover, the royalty argument faces the same central problem we noted earlier: to show why indigenous groups should receive a form of IP protection that no other contemporary group does.

Still, we do not wish to overstate the practical difficulty of allocating royalties. The International Seed Treaty, for example, creates a common fund and an institutional mechanism for distributing compensation or royalties so as to benefit traditional farmers without having to allocate specific dollar amounts to particular individuals or communities. Basically, the treaty facilitates farmer and community access to information and improved plant technology through a standard Material Transfer Agreement. However, the Seed Treaty applies to only sixty-four important food and forage crops. It remains to be seen whether the benefit-sharing provisions will work as well in practice as they do on paper.

In any case, our central critique of this argument is not in terms of practicality, but instead turns on the distinction between law and morality. What is morally appropriate is not the same as what either is or should be legally appropriate. Because other values, such as the benefits of competition, play a role in calibrating legal rules, innovators of some products are often not protected against or granted royalties from imitators. Consider three examples of innovation: the first "reality television" show that blazed the way for later comers; a successful cafe that inspired someone to open a similar cafe nearby; and the first upscale coffee establishment (say, Starbucks) that other companies mimicked in pricing and quality. Conceivably, it might be morally appropriate for imitators to pay these innovators some fee or royalty. Yet no fee or royalty is currently mandated by international law or the law of most nations. At the very most, the imitators might justifiably be legally required to acknowledge the innovators' breakthroughs. Acknowledgments are not royalties or what TK advocates seek. In our view, the lack of royalties mandated by IP law in such cases correctly strikes a balance between private and public interests, and between the need for competition and the importance of IP rights.

These examples also highlight the ways in which today's innovators build on the efforts of earlier innovators. The often-incremental nature of innovation poses a serious challenge to the royalty argument (as well as to other arguments we have discussed). Starbucks may have pioneered a particular (and successful) business model for coffee houses, but it did not invent the espresso-based drinks that are a mainstay of its business. ... [J]ust as the various Starbucks imitators are free to compete with Starbucks, Italians (or Arabs) should no more legally control espresso indefinitely than African Americans should have rights of indefinite duration in jazz or than Jewish people should have them in klezmer. All are enriched (albeit not equally) by the mixing of innovations in a vibrant public domain; absent this mixing many worthy innovations would not happen. And it would create enormous political, economic, and administrative difficulties to assign special sets of IP rights to certain discrete groups and not to others.

Donny Woolagoodja, “Testimony before the Land and Environmental Court”²⁷

In the following passage, Mr. Woolagoodja explains why, in his judgment, a non-aboriginal artist ought not be permitted to incorporate Wandjina Spirit Images in a large wooden sculpture and then display that sculpture in her front yard. Examples of authentic Wandjina appear on the left, below. The sculpture in question is shown on the right.



I am an elder and senior lawman of the Worrora Aboriginal people of the Western Kimberley region. . . . I write this as the representative of the Worrora people. I am authorised to speak on their behalf.

The term ‘Wandjina’ or ‘Wanjina’ or ‘Ounjina’ refers to the spiritual creator and source of Law for the Worrora Aboriginal people. The ‘Wandjina’ have been artistically depicted by the Worrora people for thousands of years in a uniquely distinctive form (for example as images on bark). The paintings of ‘Wandjina’ in ancient rock art in our country are there because Wandjina have ‘left’ their images at these sites as paintings. For us, these images are not ‘paintings’ in the Western sense. For us, they are living, sentient spirits. They visit us in our dreams; they instruct us in our dreams; and we interact with them when we visit their paintings at rock art sites. We reproduce these images in our contemporary art where they are distinguished by their large heads, large black eyes, and typically by halo-like rings that encircle their heads.

The ‘Wandjina’ have a spiritual or religious significance to the Worrora people. Images of ‘Wandjina’ are religious symbols and are depicted by us respectfully and in accordance with our Law.

²⁷ Source: Vanessa Mills, *Stony Response to Wandjina Sculpture*, ABC KIMBERLEY (Oct. 20, 2010), <http://www.abc.net.au/local/stories/2010/10/20/3043661.htm> [<https://perma.cc/82Q3-MKSD>]

All Worrora people whether living in the Western Kimberley or elsewhere are offended and distressed by the prominent public display of the sculpture:

- the sculpture is created and displayed by people who are not from our language or cultural group;
- the sculpture is not a genuine or authentic Wandjina;
- the sculpture is associated with the First Applicant whose book “Dreamtime: Set In Stone” argues that Aboriginal people are a “dying race” and suffering from “spiritual atrophy” and that “Aboriginal culture has all but disappeared.” She illustrates her book with Wandjina images to support an argument that “Aboriginal people are spiritually . . . in a no man’s land” and are “pitiful creatures”. The sculpture is a tangible evidence of her appropriation and diminution of our culture;
- the sculpture is a caricature of the Wandjina spirit and its presence mocks and denigrates the spiritual beliefs of the Worrora people. It exemplifies the racial and religious intolerance of those responsible for the sculpture and their contempt for our religious and spiritual beliefs;
- the misuse of the Wandjina imagery reflects badly on us as having failed to prevent it and has a negative impact on our relationship with the Aboriginal people of the Katoomba area who are embarrassed by its presence within their community;
- this misuse of our imagery humiliates us in the eyes of other Indigenous people and younger generations of our own people by undermining our attempts to protect and nurture our culture for future generations;
- Ms Tenodi’s depiction of the Wandjina imagery incorporates mouths. The Wandjina are never depicted in this way by Aboriginal people. This depiction is particularly offensive to us. The Wanjina we depict in our contemporary art are too powerful to be depicted with mouths—their power descends to Earth through the line seen as a nose; and
- Ms Tenodi is using Wandjina imagery for commercial purposes and is thereby abusing our indigenous culture.

Reform Proposals

World Intellectual Property Organization, “Traditional Knowledge and Intellectual Property”

Because the existing international intellectual property system does not fully protect traditional knowledge and traditional cultural expressions, many communities and governments have called for an international legal instrument providing *sui generis* protection.

An international legal instrument would define what is meant by traditional knowledge and traditional cultural expressions, who the rights holders would be, how competing claims by communities would be resolved, and what rights and exceptions ought to apply. Working out the details is complex and there are divergent views on the best ways forward, including whether intellectual property-type rights are appropriate for protecting traditional forms of innovation and creativity.

To take just one example, communities may wish to control all uses of their traditional cultural expressions, including works inspired by them, even if they are not direct copies. Copyright law, on the other hand, permits building on the work of others, provided there is sufficient originality. The text of the legal instrument will have to define where the line is to be drawn between legitimate borrowing and unauthorized appropriation.

On genetic resources, countries agree that intellectual property protection and the conservation of biodiversity should be mutually supportive, but differ on how this should be achieved and whether any changes to current intellectual property rules are necessary.

Fisher, “The Puzzle of Traditional Knowledge”

Many of the initiatives seeking enhanced legal protection of traditional knowledge have included a requirement that companies that rely on traditional knowledge when developing products or services disclose that reliance. The first such proposal was advanced in 1994 by a group of researchers from Peru. Since then, similar suggestions have been made in many fora—most notably in the long-standing debates under the auspices of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore.

Typically, such proposals take the form of suggestions for amendments to application-based intellectual property regimes. In some variants of this general approach, failure to comply with the disclosure requirement in an application for a patent or other intellectual property right would be grounds for denial or invalidation of the right. In others, failure to comply would trigger other sanctions but not imperil rights granted on the basis of the incomplete application.

[S]everal disclosure requirements of this general sort have been adopted by individual countries as part of their national intellectual property laws. A few have been adopted at

the regional or multilateral level. Most, however, have been rejected. Recently, for example, a proposal advanced in the Forty-Ninth Session of the WIPO General Assembly, which would have mandated that a *voluntary* disclosure principle be included in a new treaty on protections for industrial designs, was met with sufficient resistance that it contributed to postponement of a diplomatic conference to consider such a treaty.

As a mechanism for advancing, sensitively, the diverse considerations implicated by traditional knowledge, the currently dominant version of the mandatory-disclosure principle is imperfect. However, the strategy would be more promising if modified in four respects.

1. *Disconnect The Disclosure Obligation From Intellectual Property Regimes.* Instead of requiring applicants for patents, trademarks, industrial-design protection, and the like to reveal the degree to which they relied on traditional knowledge in creating the things for which they are seeking protection, the law could require all sellers of products and services to make such disclosures, regardless of whether they seek intellectual property protection. This adjustment would be less radical than it might appear. In a variety of commercial contexts unrelated to applications for intellectual property rights, sellers are already obliged to disclose aspects of their products and services. For example, in the United States, institutions offering residential mortgages must present borrowers with detailed information concerning the nature of the financial obligations they are incurring; sellers of prescription drugs must include in their packaging and advertisements warnings concerning the risks associated with their products; sellers of packaged food must reveal the contents thereof; and sellers of clothes must include labels that indicate, among other things, the materials of which they are made and where they were manufactured. The penalties for violation of these rules can be severe. A general mandatory disclosure obligation for products and services drawn from traditional knowledge would impose a modest additional regulatory burden on only a small subset of companies.

2. *Add An Obligation To Disclose The Extent To Which Members Of The Indigenous Group From Which The Knowledge Was Derived Were Involved In Manufacture Of The Product In Question Or The Provision Of The Service In Question.* This represents an adaptation of the regulations that, in the United States, currently govern companies that manufacture and sell clothing. As indicated above, such companies must reveal, among other things, where their products were produced. The proposed rule would require revelation of who manufactured products derived from traditional knowledge. The objective of such a requirement, of course, is to put pressure on companies to enlist members of indigenous groups in their production systems.

3. *Supplement State-Imposed Sanctions For Violation Of The Obligation With A Private Right Of Action.* A disadvantage of disconnecting the disclosure obligation from the intellectual property system is that it would sacrifice the deterrent effect of fear of loss of intellectual property rights. Punishing violations with fines could be reasonably effective. In the United States, for instance, the principal penalties for violations of the disclosure obligations associated with mortgages, food, drugs, and clothing are fines, and those sanctions seem to work reasonably well. But they would be even more efficacious if

reinforced by the threat of civil actions by competitors. Other information-forcing legal regimes—for example, trademark law and false-advertising law—incorporate private rights of action. The disclosure duty for traditional knowledge could and should do so as well.

4. Authorize An Administrative Agency To Specify, Through Regulations, The Ambit Of The Disclosure Obligation And The Method Of Compliance. Each of the labelling requirements outlined above is implemented by an administrative agency, which promulgates and periodically revises regulations that give companies detailed guidance in how to comply. The Federal Trade Commission bears this responsibility with respect to clothing labels, the Food and Drug Administration does so with respect to prescription drugs and food, and agencies in the state governments do so with respect to residential mortgages. A similar system could and should be used to give greater precision to a mandatory-disclosure obligation with respect to traditional knowledge. Among the questions that would be addressed and resolved through such regulations would be:

- What constitutes a “product or service” subject to the obligation?
- How substantial must have been a company’s reliance on traditional knowledge to trigger the obligation? Conversely, at what point does a company’s dependence on traditional knowledge become sufficiently attenuated that the obligation is lifted?
- How, exactly, must or may the disclosure be made? For example, must it appear on the product packaging, or would a statement on the company’s website suffice? Might companies employ a multipart disclosure—for example a simple mark on the product or its packaging, which referred purchasers to a registry (analogous, perhaps, to the registry for the Lisbon System for the International Registration of Appellations of Origin) where a more detailed description of the product’s provenance and the company’s employment practices could be found?

Some of the modifications outlined above are designed to address and resolve ambiguities or weaknesses that critics of mandatory-disclosure regimes have long stressed. But most of the modifications reflect a fundamental difference between the aspirations that have emerged from this Essay and the goals of the currently dominant type of mandatory-disclosure system. The proposal offered here does not seek to prescribe or enforce any particular standard of fair treatment, such as the benefit-sharing principle at the heart of the Nagoya protocol. It strives instead to bring into public view the kinds of information the public at large would need in order to consider what, with respect to each idiosyncratic instance of the use of traditional knowledge, would constitute fair treatment. In that way, the proposal aspires to provoke public attention to and discussion of such matters and, ultimately, to prompt a commercially significant subset of consumers to act upon their ethical conclusions. Why? Partly because such deliberations are good in themselves, but primarily because the companies that sell products and services incorporating traditional knowledge are usually responsive to consumers’ expressed ethical preferences. The long-term result of adoption of this proposal will thus be to alter the companies’ behavior for the better.

This proposal contemplates that the nations and indigenous groups from which traditional knowledge is taken would be active participants in the new regime, rather than mute beneficiaries of it. Specifically, such nations and groups can be expected to enhance and inflect the ethical debates spurred by the companies' disclosures with public statements of their own expectations of fair treatment—in much the same way that the Mowanjum representatives did with respect to the Wandjina graffiti and that the Organization of Indigenous Nations in Guiana did with respect to IRD's use of the knowledge developed by the Galibi and Palikur concerning the medicinal value of *quassia amara*. The stances taken by the groups will likely vary. Some might insist upon benefit-sharing arrangements, others might demand employment for current members of the group, others might insist upon respectful treatment of traditional symbols or rituals, others might request only appropriate attribution, and so forth.

Of course, the groups' capacity to demand such concessions would not be unlimited. Only if the expectations of fair treatment they announced resonated with the public's evolving attitudes—and, in particular, with the views of the consumers of the products or services at issue—would companies feel obliged to comply with their demands. Over time, a dialectic would likely emerge: indigenous groups and the nations in which they currently are located would request concessions from the companies making use of their knowledge; watchdog groups, the media, and consumers would respond favorably to some such requests (and thus press the companies to comply) but would respond unfavorably to others; the groups would adjust their demands accordingly; and so forth. The net result would be an episodic public conversation concerning the appropriate scope and application of the values implicated by traditional knowledge and a gradual evolution of commercial practices to track the evolving views of significant subsets of consumers.

Critical to this process, of course, is the willingness of consumers not merely to express support for norms of fair treatment, but to alter their purchasing behavior when those norms are violated. Would they? Considerable reassurance on that score can be gleaned from recent studies of consumers' responses to "Fair Trade" labels when attached to products like coffee or clothing. Such labels certify that the farmers or employees who produced the products were compensated and treated according to standards promulgated by a consortium of organizations dedicated to their protection. Surveys in which consumers are asked whether they would be willing to pay more for (or buy more of) products that meet such standards consistently elicit strong positive responses. The same is true of their willingness to pay premiums for "green" products—that is, those produced in ways that minimize damage to the environment. But skeptics have argued, plausibly, that such responses cannot be trusted, because respondents will be inclined to say what they think the questioners want to hear. Recently, however, several empirical studies have demonstrated that substantial groups of consumers do indeed behave in the predicted fashion when given the chance. That finding strongly suggests that some consumers, if offered products or services visibly associated with unfair treatment of impoverished indigenous groups, would balk—which, in turn, would prompt the companies to reform their ways.

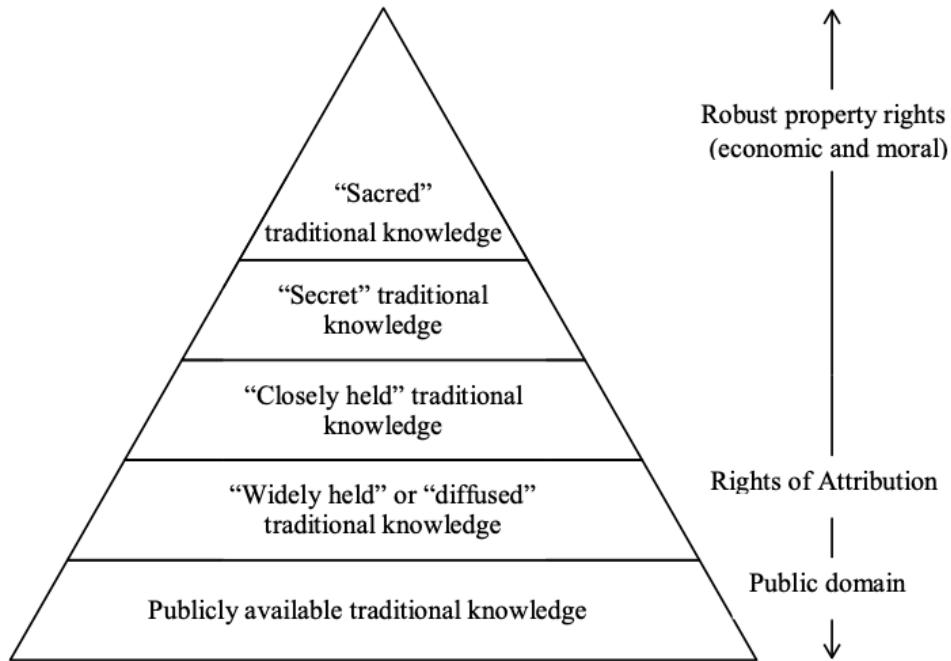
But that comforting finding suggests, ironically, a different objection to the proposal offered here. The fact that coffee bearing a “Fair Trade” label can be sold for more than coffee lacking such a label casts doubt upon the need for a new information-forcing legal rule. If compliance with consumers’ social preferences enables companies to raise their prices, why must we adopt a disclosure requirement with respect to traditional knowledge? Why not just rely on the companies’ recognition of their self-interest to prompt them to acknowledge voluntarily their indebtedness to traditional knowledge—and then to treat the relevant indigenous group more fairly? As we saw in Part I.C, the upscale sellers of Tibetan carpets have already taken this tack. Perhaps we should wait for companies in other lines of business to learn from their example.

Three considerations, in combination, suggest that it would be unwise to trust companies to recognize and exercise their power to do well by doing good. First, in most circumstances it is easier for companies to conceal both from consumers and from watchdog groups their reliance on traditional knowledge than it is to conceal unfair labor practices. Second, the diversity of interests and values at stake in disputes over traditional knowledge impedes efforts by NGOs to develop a single label and an associated set of “fair practices” to which companies could voluntarily conform and that consumers could then recognize and reward. Finally, the ethical questions raised by uses of traditional knowledge are much less familiar to the general public than the analogous issues presented by exploitative labor practices or disrespect for the environment. Given a choice, most companies currently making covert use of traditional knowledge would probably prefer to let sleeping dogs lie than to alert their consumers to their conduct, hoping to profit subsequently from their ability to capitalize on consumers’ newly energized social preferences. These generalizations are lent credence by the fact that, even after decades of academic and governmental attention to the puzzle of traditional knowledge, the sellers of Tibetan carpets are highly atypical in their willingness to acknowledge (indeed, trumpet) their fair treatment of the groups they rely upon. The bottom line is that using consumers to pressure companies to behave better is only likely to work if the law compels the companies to disclose information that will catalyze the process.

Ruth Okediji, “‘Closely Held’ Traditional Knowledge” (2019)

In 2014, the African Group, with the support of other countries, formally introduced a proposal for a tiered approach to the protection of traditional knowledge. The purpose was to create a mechanism that could more usefully classify the different types of traditional knowledge, to identify the nature of interests (economic, moral, spiritual, cultural) associated with each type, so as to better understand the scope and kind of rights likely to be asserted by indigenous peoples. The tiered approach, now incorporated into the draft text for genetic resources, roughly identifies five types of traditional knowledge: sacred, secret, closely held, widely held or diffused, and publicly available. For each category, corresponding rights were associated.

Figure 1: Traditional Knowledge Categories



The first category of “sacred” traditional knowledge includes knowledge used during religious ceremonies. In addition, it is knowledge considered by the indigenous people as sacred per se. ...

“Secret” traditional knowledge is closely approximated to trade secret law and is subject to roughly the same conditions. It consists of a body of knowledge economically valuable to the indigenous group or local community, and that is subject to reasonable efforts to keep it secret. The next is “Closely held” traditional knowledge, which is the

most legally robust. It encompasses knowledge, data, and information used in the open, developed through collective effort, and may be jointly held by its producers consistent with indigenous practices and culture. The San use of the hoodia extract would be an example of closely held traditional knowledge.

“Widely held” or “diffused” traditional knowledge includes traditional knowledge that has leaked beyond the indigenous group or local community and is known and being used in a larger community of people, including beyond the borders of the jurisdiction in which the indigenous people reside. The medicinal properties of the Neem tree extracts could be an example of widely diffused traditional knowledge.

How significant the differences are between these categories of traditional knowledge will be a matter for national law. It will also depend on the governance structure of specific indigenous and local communities. Under the Africa Group’s proposal, sacred, secret, and

closely held traditional knowledge would enjoy exclusive rights and, perhaps, the moral right of attribution. Exemplary language from this proposal follows:

Where the [subject matter]/[traditional knowledge]/[protected traditional knowledge] is [sacred], [secret] or [otherwise known] [closely held] within indigenous [peoples] or local communities, [Member States]/[Contracting Parties] [should]/[shall]: [ensure that beneficiaries have the exclusive and collective right to]/[provide legal, policy and administrative measures, as appropriate and in accordance with national law that allow beneficiaries to]: [create,] maintain, control and develop said [subject matter]/[traditional knowledge]/[protected traditional knowledge]; discourage the unauthorized disclosure, use or other uses of [secret] [protected] traditional knowledge; [authorize or deny the access to and use/utilization of said [subject matter]/[traditional knowledge]/[protected traditional knowledge] based on prior and informed consent; and] [be informed of access to their traditional knowledge through a disclosure mechanism in intellectual property applications, which may [shall] require evidence of compliance with prior informed consent or approval and involvement and benefit sharing requirements, in accordance with national law and international legal obligations], [ensure that]/[encourage] users [to]: attribute said [subject matter]/[traditional knowledge]/[protected traditional knowledge] to the beneficiaries; [provide beneficiaries with [a fair and equitable share of benefits]/[fair and equitable compensation], arising from the use/utilization of said [subject matter]/[traditional knowledge] based on mutually agreed terms;]

The fourth category of traditional knowledge, “widely held” or “diffused,” would be entitled at least to rights of attribution.

Last, publicly available traditional knowledge would be considered public domain material, freely accessible and used by others but subject to other negotiated considerations relating to cultural representation and respect for the traditions that produced the knowledge.

Thus, an important feature of the tiered approach in the Africa Group proposal is that it delineates a public domain. Specifically, it delineates a public domain recognized by indigenous people and local communities themselves. This feature is crucial to the proposal and is consistent with the way most indigenous groups and local communities function. Contrary to the literature, there is a public domain and commons analog within traditional knowledge frameworks. Integrating these concepts in the context of a scheme that makes sense to indigenous people and local communities allows for better and clearer considerations of the space in which non-members of the indigenous group and local community can freely operate. The uneasy case for property rights in traditional knowledge is limited to traditional knowledge that most indigenous people likely agree is free for others to use and build on....

Against this backdrop, it is possible to design a requirement for IP applicants to disclose the source or origin of genetic resources associated with closely held traditional knowledge. A provision like the one below could be included in national IP legislation:

Disclosure of Origin of Genetic Resources and Traditional Knowledge

Member States shall require applicants for [intellectual property] [patent, trademark or copyright] seeking the benefits of this Act to disclose the source of origin of any genetic resource and/or associated traditional knowledge utilized in the subject of the application.

With respect to applications for [intellectual property] [patent, trademark or copyright] such obligation to disclose shall extend only to “closely held” traditional knowledge as defined in the national law of the source country, provided that such country is also a member of the [TRIPS Agreement], [Nagoya Protocol] [WIPO Convention on the Protection of Genetic Resources and Traditional Knowledge].

To be “closely held” traditional knowledge shall: be linked to an identifiable indigenous group or local community continue to reflect the living traditions, lifestyles and creative activities of the indigenous group and; be subject to protection, development or maintenance under the group’s rules, norms or processes.