

THE COMMODIFICATION OF INDIGENOUS PEOPLES' TRADITIONAL MEDICINAL AND AGRICULTURAL KNOWLEDGE

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INTRODUCTION

¶1 Wealthy nations in search of more money and power have long traveled the world seeking to colonize “new land” and force native communities to conform to their customs and regulatory regimes. Now a new form of colonization is occurring as scientists and billion dollar corporations travel to underdeveloped nations, steal the indigenous peoples’ traditional knowledge, use the knowledge to make millions of dollars, and then, sometimes, prevent the indigenous people from using their own knowledge and traditions. This new quest for riches and power has been coined “bioprospecting,”¹ “biological colonialism”² and “biopiracy.”³ These scientists and large corporations travel to developing countries hoping to learn indigenous peoples’ secrets regarding the medicinal or agriculturally useful properties of plants. They absorb what knowledge they can from the indigenous people, obtain samples of different plant varieties and then return to the United States, or other developed countries, where they isolate or improve the “curing” or useful compound. Because they isolate something new and useful that does not occur naturally in the isolated state, these corporations can then obtain patents for their new invention and make millions of dollars.⁴ As a result of these patents, in some situations, the indigenous people are now required to buy seeds made “from genetic material they [originally] donated.”⁵ As a result of these patents, these corporations, in

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¹ Katy Moran, *Lessons from Bioprospecting in India and Nigeria*, CULTURAL SURVIVAL QUARTERLY, ISSUE 24.4, Jan. 31, 2001, available at <http://209.200.101.189/publications/csq/csq-article.cfm?id=1337> (last visited Dec. 16, 2005).

² S. M. Mohamed Iris, *Doublespeak and the New Biological Colonialism*, SUMERIA: “THIRD WORLD NETWORK FEATURES,” available at <http://sumeria.net/earth/colony.html> (last visited Dec. 16, 2005).

³ Gillian N. Rattray, *The Enola Bean Patent Controversy: Biopiracy, Novelty and Fish-and-Chips*, 2002 DUKE L. & TECH. REV. 8 (2002).

⁴ 35 U.S.C. § 102 (providing novelty requirements); see also Emily Marden, *The Neem Tree Patent: International Conflict Over the Commodification of Life*, 22 B.C. INT’L & COMP. L. REV. 279, 284 (1999).

⁵ See Daniel Gatti, *Patents, a New Form of Colonialism?*, Aug. 30, 1998, available at www.hartford-hwp.com/archives/40/139.html (last visited Dec. 16, 2005) (discussing that “Latin American farmers now buy seeds made in labs in the North from genetic material they donated in the 1970’s” and that “the South donated . . . genetic material believing that its botanical treasures would become part of the common inheritance of humanity, but the North has patented the products of this legacy and now sells its seeds throughout the world, making enormous profits.”).

some cases, begin destroying indigenous peoples' land and natural resources as they mass-produce their new products.⁶

¶2 The inherent injustice underlying this situation is obvious, and part of the international community is trying to find a way to protect indigenous people by securing their rights to their valuable knowledge without altering their culture. Problems arise because the intellectual property laws of many developed countries do not recognize property rights in the traditional, communal knowledge of indigenous people.⁷ Consequently, the current state of most international intellectual property laws leave indigenous people without recourse to demand compensation for their valuable contribution to the new discovery or to prevent corporations from obtaining property rights and a limited monopoly based on traditional knowledge they appropriated.⁸

¶3 Legal scholars and social scientists have been debating whether indigenous communities should obtain some form of property right in their traditional knowledge and, if not, by what means these communities can best protect their rights. Wealthy nations already recognize the value of their knowledge and capitalize on their knowledge.⁹ Affording indigenous people a property right in their knowledge would enable them to demand compensation for the appropriation of their knowledge and potentially enable them to control the use of their knowledge. However, for indigenous people to have recourse in the international community they may have to drastically alter their theories on property and their way of life. Additionally, theoretical as well as practical dilemmas arise because not only do these communities feel entitled to some sort of compensation or recognition for their knowledge and contribution, but they also want to protect the sacred significance of their knowledge.¹⁰

⁶ Pat Roy Mooney, *The Parts of Life: Agricultural Biodiversity, Indigenous Knowledge and the Role of the Third System*, 71-72, 94, available at <http://www.etcgroup.org/documents/DDPartsofLife.pdf>; FRIENDS OF THE EARTH INTERNATIONAL, A HANDFUL OF DIVERSITY: FARMERS AND BIODIVERSITY IN LATIN AMERICA 13-15 available at http://www.foei.org/publications/pdfs/handful_eng.pdf.

⁷ Under U.S. law and many developed nations laws information that is publicly or commonly known, by more than one person with no efforts to keep it secret is considered part of the public domain. See 35 U.S.C § 102; *Pennock v. Dialogue*, 27 U.S. 1, 3-4 (1989). See also Craig D. Jacoby and Charles Weiss, *Recognizing Property Rights in Traditional Biocultural Contribution*, 16 STAN. ENVTL. L. J. 74, 92 (1997) (citing Steven B. Brush, *A Non-Market Approach to Protecting Biological Resources*, in INTELLECTUAL PROPERTY RIGHTS FOR INDIGENOUS PEOPLES 133, 136).

⁸ Jacoby and Weiss, *supra* note 7, at 76 ("The petitioners' sentiments reflect the growing anger of lesser developed countries (LDCs) toward Westerners' who take plants used by traditional cultures, or who learn uses of these plants, invest in improving the traditional technologies, and profit from their commercial development without compensating the traditional people who provided key insights or essential materials.")

⁹ *Id.* at 76, n.13 (citations omitted) (discussing "numerous instances of Westerners profiting from improvements upon traditional knowledge and traditional plant varieties without compensating traditional peoples" including "Indians call for the revocation of a U.S. patent directed to use of turmeric in wound-healing," "[t]he classic anti-malarial drug quinine . . . derived from the bark of South American Cinchona trees . . . used to treat fever by the indigenous peoples of Peru in the eighteenth century," and "[t]he interests of a British company in the medicinal properties of the venom of a Sri Lankan spider . . .").

¹⁰ Jacoby and Weiss, *supra* note 7, at 91-92. The authors stated that treatment of sacred traditional biocultural knowledge is of major concern to traditional peoples. Knowledge holders may desire the right to regulate strictly or to prevent the sale, commodification, or expropriation of their sacred knowledge. Enforcement of such restrictions via an intellectual property regime, however, would require the contributors to reveal at least part of the sacred knowledge so that potential users have notice of the usage restrictions.

Wealthy nations' capitalization on this knowledge in many instances harms indigenous peoples' culture because many communities view their knowledge and use of plants as secret and sacred.¹¹

¶4 This paper weighs the advantages and disadvantages of commodification of indigenous knowledge by discussing various legal schemes and theories that potentially could protect indigenous communities' rights. While there is no perfect solution, it uses Margaret Jane Radin's theories regarding incomplete commodification to offer a workable and practical solution.

THE INDIAN NEEM TREE CONTROVERSY

¶5 The Neem tree is an evergreen tree in India known as "the curer of all ailments."¹² Indians view the Neem tree as sacred and scientists view the tree as "one of the most helpful plants on earth."¹³ Indians use the tree's "bark, leaves, flowers and seeds to treat a variety of illnesses including leprosy, diabetes, ulcers and skin disorders."¹⁴ Additionally, for centuries Indians used twigs from the tree "as an antiseptic toothbrush" and used oil from the seeds to make toothpaste, soap, and contraceptives.¹⁵ The tree also has valuable agricultural purposes because oil from its seeds provides a "powerful insecticide, repelling more than 200 species of insects and bugs," but is not harmful to humans.¹⁶

¶6 The Neem tree controversy began after W.R. Grace experimented with oil from Neem tree seeds, identified azadirachtin as the active compound that repelled insects and developed a process that stabilized the compound.¹⁷ (While useful as an insecticide in its natural state, azadirachtin rapidly decayed and was only effective for a few days to a few weeks.¹⁸) W.R. Grace's process extended the shelf life of the insecticide and enabled it to maintain its effective properties for two or more years.¹⁹ Under U.S. Patent law, the Patent and Trademark Office granted W.R. Grace a patent for this process and the stabilized result, reasoning that W.R. Grace invented a new,

Id. (citing Covenant on Intellectual Cultural and Scientific Property: A Basic Code of Ethics and Conduct for Equitable Partnerships between Responsible Corporations, Scientists or Institutions, and Indigenous Groups, art. 1 (1993) reprinted in GCCEPU, on file with author, at 23; Darrell A. Posey, *International Agreements and Intellectual Property Rights for Indigenous Peoples*, in INTELLECTUAL PROPERTY RIGHTS FOR INDIGENOUS PEOPLE 234 (Tom Greaves ed., 1994)).

¹¹ *Id.*

¹² Michael Fumento, (*W.R.*) *Grace Under Fire—For all the Wrong Reasons*, available at <http://www.fumento.com/bomis36.html> (last visited Dec. 16, 2005).

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*; Jacoby and Weiss, *supra* note 7, at 75.

¹⁶ Fumento, *supra* note 12.

¹⁷ *Id.*; Jacoby and Weiss, *supra* note 7, at 75.

¹⁸ Fumento, *supra* note 12.

¹⁹ *Id.*

useful process and insecticide that did not occur naturally.²⁰ After the patent issued, “200 organizations from 35 different nations filed a petition with the U.S. Patent Office seeking to invalidate the patent.”²¹ They argued that W.R. Grace was not entitled to the patent because the oil’s usefulness occurred naturally and the discovery was not novel because indigenous people had used the oil for this purpose for centuries.²² They further argued that any improvements to the oil were obvious.²³ In addition to their legal arguments, Indian advocates also “object[ed] to the neem patent on moral grounds, complaining that the plant is sacred and that the patent is therefore a ‘violation of [Indian] identity.’”²⁴

¶7 W.R. Grace “acknowledge[d] that India’s traditional knowledge inspired the company’s patent,”²⁵ but the company prevailed on the novelty issue because the patent was for the new process that created a new isolated and stabilized compound.²⁶ Even though the usefulness was already known in India and any improvements may have been obvious, these arguments failed because under United States law “foreign knowledge can only defeat a U.S. patent’s novelty claim if that foreign knowledge appeared in a printed publication before the invention or application by the U.S. applicant.”²⁷

¶8 In this case, W.R. Grace did change and improve the qualities of the oil and received a patent for their new discovery, and those in India were free to continue using the oil from the seed in its natural state.²⁸ It appears as though no one was necessarily harmed—Indians could continue using the oil in its natural way or pay for the new and improved oil, while W.R. Grace and society benefited from a new valuable insecticide with an extended shelf life. However, even though Indians could continue using the oil in its natural state, they had no control over how

²⁰ *Id.*

²¹ Jacoby and Weiss, *supra* note 7, at 76.

²² Marden, *supra* note 4, at 284-86.

²³ *Id.* at 284-85.

²⁴ *Id.* at 285-86 (citing Sinikka Tarvainen, *Indigenous Peoples Protest Against “Biocolonialism,”* DEUTSCHE PRESSE-AGENTUR, Nov. 29, 1997, available in LEXIS, World Library, Allnws file); John F. Burns, *Tradition in India vs. a Patent in the United States*, N.Y. TIMES, Sept. 15, 1995, at D4 (quoting Jeremy Rifkin “[w]hat many Americans have not realized is . . . the anger, frustration, and resentment in the developing countries against what they regard as piracy of their heritage . . .”).

²⁵ *More than 200 Organisations from 35 Nations Challenge US Patent on Neem*, available at <http://www.twinside.org.sg/title/neem-ch.htm> (last visited December 16, 2005).

²⁶ Marden, *supra* note 4, at 284.

²⁷ *Id.* (citing 35 U.S.C. § 102). While Indians did not prevail in challenging the Neem insecticide patent, the European Patent Office recently overturned another patent they issued to W. R. Grace in 1995 for a fungicide after finally accepting Indian arguments that Indian knowledge anticipated the invention. BBC NEWS, WORLD EDITION, INDIA WINS LANDMARK PATENT BATTLE, March 9, 2005, available at <http://news.bbc.co.uk/2/hi/science/nature/4333627.stm>. The European Patent Office originally invalidated the Patent in 2000, but it did not decide W.R. Grace’s appeal until March 2005. *Id.* See also Carlos M. Correa, *Protection and Promotion of Traditional Medicine Implications for Public Health in Developing Countries* 37, n.58 (Aug. 2002), available at <http://www.southcentre.org/publications/traditionalmedicine/toc.htm> (citations omitted) (discussing that “[i]n early 2000 a patent granted to W.R. Grace Company and US Department of Agriculture on neem oil extract used as fungicide and insecticide . . . was revoked by the European Patent Office,” but “other neem related patents have remained active, such as a patent obtained by the same company in 1992 covering specific storage-stable pesticide compositions and methods for making them . . .”).

²⁸ Marden, *supra* note 4, at 285.

W.R. Grace chose to use the oil. Furthermore, W.R. Grace most likely would have spent many years and millions of dollars developing this process if they had not discovered the Indians' knowledge. Thus, Indian traditional knowledge was extremely valuable to W.R. Grace, and Indians were harmed when they were not compensated for their valuable contribution in the same way other contributors would have been compensated.²⁹

¶9 Moreover, while Indians could continue using the oil in its natural state, many other patents involve the use of seeds themselves, not a process, and indigenous people are forced to pay for seeds even though they originally supplied the seeds and developed many of their unique characteristics through years of cultivation.³⁰ At the heart of the Neem tree controversy and other similar cases is how to compensate and protect indigenous people without destroying their culture or forcing them to assimilate their practices in accordance with developed nations' laws. As stated by Shubha Ghosh, "[t]he concern over bio-piracy is not only that the developing countries are being forced to buy back the very traditional knowledge that traditional groups claim a right to. There is the related issue of the indigenous groups being deprived of the profits being reaped by the Western companies."³¹ Problems arise in addressing this dilemma because "rights in the knowledge are not defined, and in fact may be an alien or hostile notion" to indigenous people.³²

²⁹ In many situations, corporations pay royalties in exchange for using scientists' inventive knowledge, or scientists assign their property rights in their patents to corporations. Emily Marden stated,

[i]ndeed, there is a substantial amount of money at stake in these types of disputes. One report estimates that the developing world would gain \$5.4 billion per year if multinational food, seed, and pharmaceutical firms paid royalties for local knowledge and plant varieties. Examples of one-way flow are numerous. For example, the native Indian plant *rauwolfina serpentina* provides raw material for a hypertension drug with \$260 million in U.S. sales annually, yet none of the profits flows back to India. Concerns about this economic phenomenon are widely shared. Indian activist Vandana Shiva maintains that the economic inequality between the affluent industrialized countries and the poor Third World ones was produced by 500 years of colonialism and the continued creation of mechanisms for draining wealth out of the Third World.

Id. at 287-88 (citations omitted). As discussed *infra* p. 17, Madhavi Sunder asserts that one of the harms caused by cultural appropriation is that "outsiders [may] exploit the cultural resources of a people, with the people losing an economic benefit of their cultural production," which is "akin to [claims] of unjust enrichment or 'cultural theft.'" Madhavi Sunder, *Intellectual Property and Identity Politics: Playing with Fire*, 4 J. GENDER RACE & JUST. 69, 73 (Fall, 2000).

³⁰ See Daniel Gatti, *Patents, a New Form of Colonialism?*, Aug. 30, 1998, available at www.hartford-hwp.com/archives/40/139.html (last visited Dec. 16, 2005) ("Latin American farmers now buy seeds made in labs in the North from genetic material they donated in the 1970's" and that "the South donated . . . genetic material believing that its botanical treasures would become part of the common inheritance of humanity, but the North has patented the products of this legacy and now sells its seeds throughout the world, making enormous profits.").

³¹ Shubha Ghosh, *Globalization, Patents and Traditional Knowledge*, 17 COLUM. J. ASIAN L. 73, 90 (Fall, 2003).

³² *Id.*

INTELLECTUAL PROPERTY AND TRADE SECRET LAWS—POTENTIAL MEANS TO PROTECT
INDIGENOUS PEOPLES' RIGHTS TO THEIR TRADITIONAL KNOWLEDGE

UNITED STATES' AND INTERNATIONAL INTELLECTUAL PROPERTY LAWS

¶10 Under United States statutory patent law, a person can obtain a patent if they prove five elements: the discovery must (1) fall under the proper subject matter;³³ (2) be useful;³⁴ (3) novel;³⁵ (4) non-obvious;³⁶ and (5) properly disclosed.³⁷ No one can obtain a patent for a natural phenomenon, which includes living organisms or processes that occur naturally.³⁸ However, a person can obtain a patent if they alter the natural phenomenon in a new and useful way that satisfies the patent requirements.³⁹ In the United States, information that was publicly known or published will prevent a person from obtaining a patent if their new discovery is identical.⁴⁰ However, if knowledge in a foreign country is identical to the inventor's discovery, it will only preclude a patent if such knowledge was published before the inventor discovered the invention.⁴¹ Under United States law, the first person to invent is also given priority in a patent proceeding.⁴² Accordingly, if indigenous people could obtain intellectual property rights for their indigenous knowledge, they would have priority over an American scientist who appropriated their knowledge. In most other Western countries, however, the first person to file their patent application has priority to the patent rights.⁴³

¶11 During the last few decades, several developing and developed countries have signed conventions and treaties that directly deal with international intellectual property rights. These agreements include the Paris Convention for the Protection of Industrial Property,⁴⁴ (Paris Convention), the Patent Cooperation Treaty,⁴⁵ the Agreement on Trade-Related Aspects of Intellectual Property Rights⁴⁶ (TRIPS) and the North American Free Trade

³³ 35 U.S.C. § 101.

³⁴ *Id.*

³⁵ *Id.* § 102.

³⁶ *Id.* § 103.

³⁷ *Id.* § 112.

³⁸ *Diamond v. Chakrabarty*, 447 U.S. 303, 309-10 (1980).

³⁹ *Id.*

⁴⁰ 35 U.S.C. § 102.

⁴¹ *Id.*

⁴² *Id.*

⁴³ DONALD S. CHISUM, ET AL, *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 480 (3d. ed. 2004).

⁴⁴ Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, art. 2, 13 U.S.T. 1, 828 U.N.T.S. 107 (amended September 28, 1979). This document is also available at http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html.

⁴⁵ Patent Cooperation Treaty, June 19, 1970, art 8, 11, 28 U.S.T. 7645, T.I.A.S. No. 8733 (as in force from April 1, 2002). This document is also available at <http://www.wipo.int/pct/en/texts/articles/atoc.htm>.

⁴⁶ Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, GATT Doc. MTN/FAII - A1C, *reprinted in* 33 I.L.M. 1197 (1994). This document is also available at http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.

Agreement (NAFTA).⁴⁷ The Paris Convention was the first multinational convention governing intellectual property rights on an international scale, and it required applicants to follow individual nations' own intellectual property laws.⁴⁸ The more recent Patent Cooperation Treaty created a means where patentees could obtain patents in multiple countries through one application.⁴⁹ Under the Paris Convention and the Patent Cooperation Treaty if an applicant files applications in member countries within twelve months after they filed their first application in a member country, the date of their first application would be the priority date for their invention in all the other countries.⁵⁰

¶12 The TRIPs agreement incorporated a large part of the Paris Convention and “established minimum enforcement standards” and “sanctioning mechanisms to compel compliance” with international intellectual property laws.⁵¹ TRIPs and NAFTA also required every member country to treat all applicants from all member countries the same.⁵² Additionally, TRIPs and NAFTA ensured certain procedural safeguards and minimum remedies when disputes arise.⁵³

¶13 Under most national and international patent laws, communal knowledge gained over centuries is not patentable because it is considered part of the public domain and available to everyone.⁵⁴ These laws have prevented indigenous people from asserting rights to share the commercial benefits scientists reap after developing valuable medicines or products based on their knowledge. These laws also prevent indigenous people from stopping scientists and/or multinational corporations from obtaining a twenty-year monopoly on seeds, new drugs, products or processes.⁵⁵

¶14 For indigenous peoples' intellectual property rights to be recognized on an international scale, either the developed countries will have to change a fundamental characteristic of their intellectual property laws or indigenous people will have to change their notions regarding property—thus, changing the way their society and culture functions. The chances that developed nations will change their laws are very unlikely and if indigenous

⁴⁷ North American Free Trade Agreement, Dec. 17, 1992, 107 Stat. 2057. This document is also available at <http://www.dfait-maeci.gc.ca/nafta-alena/agree-en.asp>.

⁴⁸ See Michael A. Gollin & Sarah A. Laird, Article, *Global Policies, Local Actions: The Role of National Legislation in Sustainable Biodiversity Prospecting*, 2 B.U. J. SCI & TECH. L. 16, 23 (citing Paris Convention, Mar. 20, 1883, 13 U.S.T. 1, 828 U.N.T.S. 107, as revised at the Stockholm Revision Conference, July 14, 1967, 21 U.S.T. 1538, 828 U.N.T.S. 305).

⁴⁹ *Id.* (citing Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, T.I.A.S. No. 8733).

⁵⁰ CHISUM, *supra* note 43, at 120-22 (citing Patent Cooperation Treaty, *supra* note 45, at art. 8, 11; Paris Convention, *supra* note 44, at art. 4).

⁵¹ Gelvina Rodriguez Stevenson, Note, *Trade Secrets: The Secret to Protecting Indigenous Ethnobiological (Medicinal) Knowledge*, 32 N.Y.U.J. INT'L L. & POL. 1119, 1129 (Summer 2000) (citing Doris Estelle Long, *The Impact of Foreign Investment on Indigenous Culture: An Intellectual Property Perspective*, 23 N.C. J. INT'L L. & COM. REG. 229, 249-50 n. 51 (1998)).

⁵² *Id.* at 1130 (citing TRIPs, *supra* note 46, art. 3, at 85; NAFTA, *supra* note 47, art. 301).

⁵³ *Id.*

⁵⁴ Jacoby and Weiss, *supra* note 7, at 91-92.

⁵⁵ *Id.*; 35 U.S.C. §§ 101-103, 112, 154.

people conform their ideas regarding property with Western notions, they risk destroying important aspects of their culture when many indigenous communities are built around sharing resources and services. However, if developing countries enact their own intellectual property laws that protect their medicinal and agricultural knowledge and practices, the act of obtaining a patent, or publishing their knowledge, could potentially prevent United States inventors and possibly inventors from other nations as well from obtaining a patent for the same invention, or an obvious variation of the invention.⁵⁶

INTERNATIONAL TREATIES AND CONVENTIONS REGARDING INDIGENOUS PEOPLES' RIGHTS

¶15 While international intellectual property laws have not yet recognized a property right in traditional knowledge, other international conventions and treaties have recognized indigenous peoples' rights in their culture, knowledge, and resources. In 1992, the United Nations drafted the Convention on Biodiversity (CBD)⁵⁷ and signatory countries agreed to "conserve biodiversity and equitably share resulting benefits."⁵⁸ They also "agreed that the benefits of utilizing biodiversity, including technology, should be shared with the source country."⁵⁹ Specifically, the CBD referred to the "protection of indigenous and traditional knowledge."⁶⁰ Under article 8(j) "signatories [must] find a means to 'respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities by embodying traditional lifestyles.'"⁶¹ Article 15, in turn, grants the state "the right to grant access to genetic resources," and "creates a legal basis for signatory states to bargain with those who desire access for commercial development and negotiation benefit sharing agreements."⁶² Based on this language, the CBD is one potential way to protect indigenous people because scientists and corporations of signatory countries are required to consult with and abide by the laws of underdeveloped nations when they use that country's natural resources.⁶³ Accordingly, national governments are placed in a position to negotiate monetary compensation for the use of knowledge and resources, as well as potentially control the use of their knowledge and their natural resources.

⁵⁶ See *Id.* §§ 102, 103.

⁵⁷ Convention on Biodiversity at United Nations Convention on Biological Diversity, June 5, 1992, art. 6, U.N. Doc. DPI/1307, 31 I.L.M. 818 (1992). This document is also available at <http://www.biodiv.org/convention/articles.asp>.

⁵⁸ Stevenson, *supra* note 51, at 1133 (citing Convention on Biodiversity, *supra* note 57, at art. 6).

⁵⁹ *Id.* at 1133-34 (citing CBD, *supra* note 57, at art. 16.)

⁶⁰ *Id.* (citing U.N. Conference on Environment and Development, Agenda 21, U.N. Doc. A/Conf. 151/26/Rev.1, ch. 16.39 (1992)).

⁶¹ Ghosh, *supra* note 31, at 117 (citing CBD, *supra* note 57, at art 8(j)).

⁶² *Id.* (citing CBD, *supra* note 57, at art. 15).

⁶³ Michael A. Gollin & Sarah A. Laird, *Global Policies, Local Actions: The Role of National Legislation in Sustainable Biodiversity Prospecting*, 2 B.U. J. SCI. & TECH. L. 16 para. 1, 5-14 (1996); see also Luisa Maffi, *Toward the Integrated Protection of Language and Knowledge as a Part of Indigenous Peoples' Cultural Heritage*, CULTURAL SURVIVAL QUARTERLY, ISSUE 24.4, Jan. 31, 2001, available at <http://209.200.101.189/publications/csq/csq-article.cfm?id=272>.

¶16 In addition to the CBD, the International Labour Organisation Convention of Indigenous and Tribal Peoples (ILO Convention) “upholds indigenous and tribal peoples’ right to recognition and retention of customary law and practices.”⁶⁴ It also contains “special reference to control over land and resources and collective land ownership” and has language “concerning the maintenance and development of indigenous and tribal identities, traditions, values, and languages.”⁶⁵ However, the ILO Convention only has a few signatory countries; therefore, its use as an effective protection measure is limited.⁶⁶

¶17 The United Nations is also presently working on drafting the UN Declaration on the Rights of Indigenous People. While this would only be a declaration and would not have any binding or enforcement power, it is a step in the right direction as countries begin to recognize indigenous peoples’ rights. The draft declaration discusses a “concern[] that indigenous peoples have been deprived of their human rights and fundamental freedoms, resulting . . . in their colonization and dispossession of their lands, territories and resources”⁶⁷ The draft declaration also “[r]econgiz[es] the urgent need to respect and promote the inherent rights and characteristics of indigenous peoples, especially their rights to their lands, territories and resources, which derive from their political, economic and social structures and from their cultures, spiritual traditions, histories and philosophies.”⁶⁸ Article 12 also would recognize indigenous peoples’ “right to the restitution of cultural, intellectual, religious and spiritual property taken without their free and informed consent or in violation of their laws”⁶⁹

¶18 Based on the international recognition of underdeveloped nations’ rights to govern the use of their natural resources, the recognition of their right to develop their own laws regarding property and the use of their culture and the recognition that outside nations must also abide by such laws, scholars have suggested, and many countries have already begun, enacting sui generis laws⁷⁰ to protect their natural resources and their peoples’ way of life.⁷¹ While they may not be able to prevent corporations from obtaining patents in their own developed nations, they may be able to obtain damages based on the entities’ failure to respect the developing nations’ laws when it obtained the knowledge or misused their natural resources.

⁶⁴ Maffi, *supra* note 63 (citing ILO Convention, available at <http://www.ciesin.org/docs/010-282/010-282.html>).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ Draft Declaration on the Rights of Indigenous people, available at <http://www.usask.ca/nativelaw/ddir.html> (last visited Dec. 16, 2005).

⁶⁸ *Id.*

⁶⁹ *Id.* at art. 12.

⁷⁰ Sui generis laws are laws enacted specifically to address a certain problem or issue.

⁷¹ See Katy Moran, *Lessons from Bioprospecting in India and Nigeria*, CULTURAL SURVIVAL QUARTERLY, ISSUE 24.4, Jan. 31, 2001, available at <http://209.200.101.189/publications/csq/csq-article.cfm?id=1337>.

TRADE SECRET PRINCIPLES

¶19 Due to the fundamental differences in developed and undeveloped nations' property schemes and the difficulties in developing a universal standard, some scholars have proposed using Trade Secret principles to protect indigenous peoples' rights and the use of their traditional knowledge.⁷² While agreeing that intellectual property laws should evolve to provide indigenous people some protection, Gelvina Stevenson argues that trade secret protections should also be invoked because these principles may help "sustain indigenous peoples' present way of life," protect indigenous people "from further colonization and exploitation," "conserve biodiversity," and "retain the possibility that indigenous peoples may seek economic benefit in the future if they so choose."⁷³ Stevenson contends that trade secret notions are ideal because they "reflect[] economic policy judgments about how to encourage innovation, competition and consumer welfare," and because they are also "based on ethical notions about proper business behavior" and "general concepts of morality and good faith."⁷⁴

¶20 Both TRIPS and NAFTA incorporated trade secret principals and provide "legal remed[ies] for the misappropriation of trade secrets on the international level."⁷⁵ Generally to obtain trade secret protection (1) "the information must be secret;" (2) "the information must have commercial value because it is secret;" and (3) "the person claiming the trade secret must have made reasonable efforts to keep the information secret."⁷⁶ Under NAFTA and TRIPS, trade secret protection covers both intangible and tangible subject matter.⁷⁷ To have an action for a misappropriated secret, generally one must prove: (1) "the trade secret was discovered by 'improper means;'" or (2) the person disclosing the information breached a duty of confidentiality.⁷⁸

¶21 Stevenson argues that indigenous communities have a better chance of invoking trade secret laws without altering their general practices and way life because trade secret laws provide indigenous people a means to respect the sacred nature of their knowledge and rituals.⁷⁹ Furthermore, most communities keep their medicinal knowledge limited to a few people.⁸⁰ Generally the tribe will know that a certain plant provides some benefits, but they will not now why or how to use the plant to confer that benefit.⁸¹ The knowledge likely would still be

⁷² Stevenson, *supra* note 51, at 1120.

⁷³ *Id.* at 1120-21.

⁷⁴ *Id.* at 1153.

⁷⁵ *Id.*

⁷⁶ *Id.* at 1156; *see also* NAFTA, *supra* note 47, at art. 1711.

⁷⁷ Stevenson, *supra* note 51, at 1156.

⁷⁸ *Id.* at 1158-59.

⁷⁹ *Id.* at 1156-64.

⁸⁰ *Id.* at 1162.

⁸¹ *Id.*

protected under the first element because under trade secret laws secrecy does not have to be absolute but is “judged in light of the circumstances” including: “the industry’s level of general knowledge, the information’s ascertainability, the offensiveness of a misappropriator’s conduct and anything else that affects equities.”⁸² However, indigenous people could run into problems if researchers had already published the information after observing the tribe.⁸³

¶22 Under the second element, indigenous people also have a good chance of proving that the secret nature of their traditional knowledge has commercial value.⁸⁴ Courts usually employ a lenient standard that just requires the “potential” need for commercial value.⁸⁵ Because this information can save pharmaceutical or agricultural companies a lot of money and time, in many instances a court likely would find that the indigenous community satisfied the second element.⁸⁶ If indigenous people were able to assert their right to monetary compensation or otherwise, corporations most likely would pay them rather than expending exorbitant amounts of time and money to discover the exact same thing.⁸⁷

¶23 Under the third element, indigenous people would be able to prove misappropriation by showing (1) “the trade secret was discovered by ‘improper means;’” or (2) “the disclosure or use of the trade secret breaches a confidence of duty,” which could arise via “contract or implicitly from the parties’ conduct or relationship.”⁸⁸ Accordingly, a misrepresentation made by a researcher regarding his purpose in obtaining the knowledge or a failure to disclose pertinent information could amount to improper means.⁸⁹

¶24 While trade secret protection has its benefits, it also has some drawbacks. Trade secret protection does not prevent corporations from obtaining the knowledge through their own work or prevent other indigenous communities with the same or similar knowledge from keeping their knowledge secret.⁹⁰ Trade secrets also encourage communities to keep their information secret.⁹¹ This is a serious drawback when many of these communities and their different languages are at risk of disappearing and this valuable knowledge could be lost forever. However, despite these disadvantages and potential harmful consequences, trade secret laws could afford

⁸² *Id.* at 1157, 1165.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.* at 1165.

⁸⁶ *Id.* Traditional knowledge points the researcher or corporation in the right direction—they know the basic value of the plant and only need to run experiments on the plant to isolate and experiment with the beneficial compound.

⁸⁷ *Id.* at 1158.

⁸⁸ *Id.* at 1166-67.

⁸⁹ *Id.* at 1168-69.

⁹⁰ *Id.* at 1171.

⁹¹ *Id.* at 1171-72.

some indigenous communities a means to receive compensation for the appropriation of their traditional knowledge and provide one way to protect their rights.⁹²

MAJOR THEORIES REGARDING COMMODIFICATION OF TRADITIONAL KNOWLEDGE

¶25 In her book, Contested Commodities, Radin proposes an idea of incomplete commodification.⁹³ Under this approach, rather than viewing things as commodifiable or noncommodifiable, one “should recognize a continuum reflecting degrees of commodification that will be appropriate in a given context.”⁹⁴ Radin recognizes what is called a double bind where both commodification and noncommodification will have harmful consequences.⁹⁵ According to Radin, when there is no ideal solution the best practical result can be reached through compromise and incomplete commodification.⁹⁶ With incomplete commodification, some disadvantages will still be unavoidable, but you will be able to help solve many of the problems and anticipated harms.⁹⁷

¶26 Commodification of traditional indigenous knowledge is generally presented in terms of allowing the indigenous groups to obtain property rights in their knowledge. This idea presents a double bind because keeping this knowledge as a non-commodity has serious disadvantages for indigenous communities, but commodifying this knowledge also could have serious disadvantages for these communities.⁹⁸ As discussed by Madhavi Sunder, one of the disadvantages of noncommodification of cultural knowledge and traditions is cultural appropriation.⁹⁹ Sunder defines cultural appropriation as “the phenomenon of culture traveling in the opposite direction: ‘the taking—from a culture that is not one’s own—of intellectual property, cultural expressions or artifacts, history and ways of knowledge.’”¹⁰⁰ Cultural appropriation presents several dangers to indigenous communities including: (1) “non-owners of a culture may misrepresent another culture, and thereby damage the culture being distorted;”¹⁰¹ and (2) “outsiders [may] exploit the cultural resources of a people, with the people losing an economic benefit of their cultural production.”¹⁰² The second danger is “akin to [claims] of unjust enrichment or ‘cultural theft.’”¹⁰³ In

⁹² *Id.* at 1171.

⁹³ MARGARET JANE RADIN, *CONTESTED COMMODITIES*, *excerpt in* ERTMAN AND WILLIAMS, *RETHINKING COMMODIFICATION* 81 (2005).

⁹⁴ *Id.* at 85.

⁹⁵ *Id.* at 85-87.

⁹⁶ *See id.*

⁹⁷ *Id.*

⁹⁸ *See supra* text pp. 2-3 and accompanying footnotes.

⁹⁹ Madhavi Sunder, *Intellectual Property and Identity Politics: Playing with Fire*, 4 J. GENDER RACE & JUST. 69, 73 (Fall, 2000).

¹⁰⁰ *Id.* (quoting BRUCE ZIFF & PRATIMA V. RAO, INTRODUCTION TO CULTURAL APPROPRIATION: A FRAMEWORK FOR ANALYSIS, IN *BORROWED POWER: ESSAYS ON CULTURAL APPROPRIATION* 1, 20 (Bruce Ziff & Pratima V. Rao eds., 1997)).

¹⁰¹ *Id.* (citation omitted).

¹⁰² *Id.* (citation omitted).

¹⁰³ *Id.*

addition to these two dangers, when corporate outsiders appropriate indigenous knowledge they generally use the knowledge to obtain a patent that can prevent the indigenous people from using their own knowledge and resources without compensating the corporation.¹⁰⁴ This development in turn puts the indigenous communities at an even greater economic disadvantage.

¶27 However, if you allow groups to obtain property rights in their culture, you risk (1) limiting the free exchange of ideas; (2) losing their knowledge forever because rain forests are being depleted and these people and communities are also dying off and (3) risk cultures becoming static because they obtain a property right in a certain image or knowledge, which may hinder change.¹⁰⁵ Additionally, if allowing these cultures to obtain property rights means these cultures must conform to Western ideals, you (1) risk commodifying their knowledge and use of plants in ways that are against their religious beliefs and (2) risk imposing Western views of property rights and commercialization on indigenous people and harming their way of life.¹⁰⁶

¶28 Following Radin's theories of incomplete commodification, this paper recognizes that there is no ideal solution to this problem. However, most of the concerns about commodification discussed above involve the idea of allowing cultures to have complete property rights in all aspects of their culture including their traditions, religious beliefs, knowledge and image. However, rather than allowing cultures the complete and total right to obtain group property rights in their culture, laws can be constructed that view certain forms of cultural knowledge or traditions as inalienable, while allowing others forms to be considered property and thus alienable. When specifically addressing whether indigenous people should obtain property rights in their traditional medicinal or agricultural knowledge, not all of the theoretical disadvantages and harmful consequences discussed for commodifying cultures generally are present. For example, allowing a group to have a property right in its image very well could promote the culture to remain static and promote hardship and discrimination towards dissenting groups within the culture.¹⁰⁷ However, allowing a property right in indigenous knowledge that recognized the changing nature of the knowledge, and the ability of the group to retain ownership and control of the knowledge as it changes would not promote a static culture. While some of the disadvantages would still exist if nations recognized a property right in this particular form of cultural knowledge, using regulatory schemes and certain legal theories might help mitigate some of these

¹⁰⁴ See *supra* notes 30-32 and accompanying text.

¹⁰⁵ MADHAVI SUNDER, *COMMODYING INTELLECTUAL AND CULTURAL PROPERTY*, excerpt in ERTMAN AND WILLIAMS, *RETHINKING COMMODYIFICATION* 168 (2005).

¹⁰⁶ See *supra* text pp. 2-3 and accompanying footnotes.

¹⁰⁷ Sunder, *supra* note 99, at 89-90.

potential disadvantages while eliminating the harms caused by appropriation of the culture when traditional people can assert no rights over their traditional knowledge. Using Carol Rose’s terms, this incomplete commodification of cultural knowledge may not be the “first-best” choice, a potentially unattainable choice, but most likely is the “second-best” choice in our imperfect world.¹⁰⁸

¶29 In the following subsections I will address three scholars’ theories regarding commodification of traditional knowledge, all of which focus on incomplete commodification and using property laws creatively.

SHUBHA GHOSH’S THEORIES ON COMMODIFICATION OF TRADITIONAL KNOWLEDGE

¶30 As discussed by Shubha Ghosh in his article, *Globalization, Patents and Traditional Knowledge*, “[t]here are three basic positions in the traditional knowledge debate, which [include] the public domain position, the appropriation position and the moral rights position.”¹⁰⁹ Under the public domain position, traditional knowledge should be kept “in the public domain, to be shared by all constituencies in a global commons.”¹¹⁰ The “[a]dvocates of the public domain position are opposed to the commodification of traditional knowledge and are wary of any legal ownership created to control and regulate its use.”¹¹¹ In contrast, proponents of the appropriation position “support exclusive ownership of traditional knowledge with rights vested in that entity that makes commercial or other practical use of the knowledge.”¹¹² This position supports the commodification of traditional knowledge “by entities that can make the greatest use of such knowledge through dissemination to as wide a market as possible.”¹¹³ Lastly, the moral rights position supports the protection of indigenous communities’ rights by giving these communities “either a complete ownership interest that would block any claims by actual appropriators and exploiters of the knowledge or a stake in any commercial exploitation made by multinational corporations.”¹¹⁴ As recognized by Ghosh, “[t]he moral rights position provides a more ambiguous approach to commodification.

¹⁰⁸ CAROL M. ROSE, AFTERWARD: WITHER COMMODIFICATION? in ERTMAN AND WILLIAMS, RETHINKING COMMODIFICATION 405-08 (2005). Carol Rose asserts that “Radin’s double bind suggests a way of thinking that market-friendly economists developed some time ago The concept is that of the ‘second best,’ [which in] economic thinking . . . is an attempt to compare things.” *Id.* at 405. She states that thinking about commodification in a second-best framework allows one to compare bad situations while acknowledging that some other (unattainable) situation would be ideal. Looked at this way, commodification is not always the worst-best. Sometimes it is just second best—in a world in which first best isn’t feasible, and other options are even worse than second best.

Id. at 408.

¹⁰⁹ Ghosh, *supra* note 31, at 79.

¹¹⁰ *Id.*

¹¹¹ *Id.* at 80.

¹¹² *Id.* at 79. Generally, “this position would lead to ownership of traditional knowledge by multinational companies situated in the developed world.” *Id.*

¹¹³ *Id.* at 80.

¹¹⁴ *Id.* at 79.

The aim of the moral rights position is to endorse the rights of traditional knowledge holders and their autonomy in deciding how the knowledge gets used, including the possibility of commodification.”¹¹⁵

¶31 Ghosh suggests that “[t]he creation of an appropriate system for the protection of traditional knowledge should be guided by the goal of *empowering traditionally subordinated groups*,” which “involves structuring rights over traditional knowledge that address the balance between ownership and control.”¹¹⁶ He argues “it is necessary to protect peoples who are the source of the knowledge,” which “is rooted in groups and developed . . . over time.”¹¹⁷

¶32 In light of these concerns, Ghosh proposed four potential models that could be used to “structure rights over traditional knowledge.”¹¹⁸ The first model is the public domain model under which “traditional knowledge is not owned by anyone, and everyone is free to use it.”¹¹⁹ The advantages of this model are that “it facilitates the sharing of knowledge and eliminates the threat of expropriating traditional knowledge and exploiting indigenous people through intellectual property law.”¹²⁰ While people could not employ statutory or common law intellectual property laws to protect traditional knowledge, social structures could still protect traditional knowledge.¹²¹ As examples of social structures, Ghosh discussed a draft Canadian report for protecting traditional designs of the Elders of the Blood tribe, which invoked “customary regimes [that] governed the transfer, licensing and enforcement of these rights as well as the settlement of disputes arising from the infringement of these rights.”¹²² Additionally, “[s]ystems of codification and secrecy [have] also protected traditional medicines in South Asia.”¹²³ Furthermore, in India, “inventions of modern medicine are protected by the patent system,” but traditional medicine is protected “through codification or through regimes of ritual and secrecy,” some of which conferred exclusive rights similar to patent rights.¹²⁴

¶33 Ghosh recognized that this model has several drawbacks. As illustrated by the examples of using social structure to protect traditional knowledge, employing these schemes actually takes a lot of this knowledge out of the public domain—contrary to the underlying theory.¹²⁵ Furthermore, issues arise regarding what can be considered

¹¹⁵ *Id.* at 80.

¹¹⁶ *Id.* at 111.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 112-21.

¹¹⁹ *Id.* at 112.

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.* at 112-13.

¹²⁵ *Id.*

public knowledge.¹²⁶ Ghosh discusses whether such knowledge should be considered a commons, where everyone has access to the information and knowledge, or a “limited commons,” where the knowledge is shared among a limited group but closed to the outside world.¹²⁷ If the proponents of the public domain model chose the commons point of view, they would have to eliminate the protection afforded traditional knowledge by social structures.¹²⁸ Furthermore, such a system would not empower the traditional knowledge holders because they still would not have any rights over their knowledge.¹²⁹ Contrastingly, if they chose a limited commons, then the indigenous group could exploit the outside world.¹³⁰ But even if the outside world was unable to obtain a patent, they could still commercially exploit any knowledge they obtained from the indigenous group within their own countries.¹³¹

¶34 Ghosh’s second model is the Commercial Use Model under which there would be no “formal intellectual property law,” but this model would “protect the . . . first entity to make commercial use of the traditional knowledge.”¹³² “This model is based on the common law of misappropriation, which protects the investment a person has made in creating a new product or service from subsequent users.”¹³³ This model would obviously fail to meet “the goal of preserving traditional knowledge from commercial exploitation” and would fail to protect the indigenous people unless they made commercial use of their knowledge, which may be antithetical to their spiritual beliefs.¹³⁴ However, Ghosh also recognized several advantages to this model in that it “would provide incentives for developing and improving traditional knowledge,” and it would protect both indigenous people and commercial entities assuming they used the knowledge first.¹³⁵ The model “may not strengthen the position of indigenous peoples, although it may, in the best case, however unrealistic, allow indigenous peoples to acquire power.”¹³⁶ Ghosh proposed that the problems associated with this model might be solved by using it in conjunction with the trust model and the indigenous rights model, discussed below.¹³⁷

¶35 Under the Trust Model, a right in the traditional knowledge created by the law of a developing nation would be assigned to “another entity that would act as a trustee for the benefit of the traditional knowledge

¹²⁶ *Id.* at 113-14.

¹²⁷ *Id.* at 114 (citing Carol M. Rose, *The Several Futures of Property: of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129 (1998)).

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 115.

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.* at 116.

¹³⁴ *Id.* at 115-16.

¹³⁵ *Id.*

¹³⁶ *Id.* at 116. As an example of the harm that might happen to indigenous communities, Ghosh discussed the problems on Native American Reservations when they looked to gambling and tourism to create wealth. *Id.*

¹³⁷ *Id.* at 117.

holders.”¹³⁸ This model is similar to the approach used in the CBD because “signatories [must] find a means to ‘respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities by embodying traditional lifestyles,’”¹³⁹ because it gives “the state the right to grant access to genetic resources,” and because it “creates a legal basis for signatory states to bargain with those who desire access for commercial development, and to negotiate benefit-sharing agreements.”¹⁴⁰ Under this language, corporations would pay proceeds obtained from use of the knowledge to the state or trustee who would then distribute the proceeds to the indigenous group.¹⁴¹

¶36 The advantages of the trust model include “having an identifiable bargaining agent,” which would prevent placing the indigenous communities’ in a vulnerable bargaining position when they lacked knowledge regarding commerce and foreign laws.¹⁴² This model also would allow the trustee to negotiate terms favorable to the communities that addressed ecological and preservation concerns.¹⁴³ However, there is also the possibility that the trustee would not fully take into consideration the indigenous peoples’ concerns.¹⁴⁴ As discussed by Rosemary Coombes, “the ‘assumption that transnational corporations or more developed countries are unfairly exploiting local communities is exaggerated in comparison to the exploitation by the political-economic elites of less developed countries who are far more likely to be engaged in commercial extraction resulting in the resource degradation that impoverishes local communities.’”¹⁴⁵ “Thus, one’s view of the trust model depends heavily on whether one ‘trusts’ the trustee. . . . [S]uccessful implementation of the trust model would require attention to the disparities of power within the entity acting as a trustee[]” whether they were states, nongovernmental organizations or tribal corporations.¹⁴⁶

¶37 The last model that Ghosh discussed was the ownership model where “rights would be assigned to an individual or group within the traditional knowledge community”—similar to intellectual property rights.¹⁴⁷ As discussed by Ghosh, “[t]he simple recognition of a legally defined domain could have the effect of protecting and preserving traditional knowledge” because in addition to “encouraging invention and commercialization,

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.* at 117-18.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 118 (quoting Rosemary J. Coombe, *Intellectual Property, Human Rights, & Sovereignty: New Dilemmas in International Law Posed by the Recognition of Indigenous Knowledge and the Conservation of Biodiversity*, 6 *IND. J. GLOBAL LEGAL STUD.* 59 (1998)).

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

[intellectual property law] is also a method of protecting privacy and controlling access.”¹⁴⁸ Madhavi Sunder has also discussed that allowing group intellectual property rights in culture could countervail oppression and act as a source of empowerment.¹⁴⁹ However, as discussed in the next section, most international and the United States intellectual property laws do not recognize property rights in communal knowledge developed over centuries and these nations will resist changing their laws. Along with this problem come the problems of defining the group and of imposing Western ideals regarding individualistic society and commercialism on indigenous groups with gift and community oriented societies.

KEITH AOKI’S THEORIES REGARDING COMMODIFICATION OF TRADITIONAL KNOWLEDGE

¶38 In his article *Weeds, Seeds, & Deeds: Recent Skirmishes in the Seed Wars*, Kieth Aoki recognized Ghosh’s point that “that property models are, in one form or another, here to stay for the foreseeable future, and if the choice is between different property models with a normative goal of empowering traditionally disenfranchised groups, the question may be: how might we begin rethinking the idea of property?”¹⁵⁰ He suggests that it is unnecessary to categorize a property right in traditional knowledge under traditional ideas of individual property and exclusive rights.¹⁵¹ Rather, he feels the property right could be similar to general notions of public property rights and limited commons where there is some sort of governmental regulation that limits exclusive access by all.¹⁵²

¶39 Aoki discussed Carol Rose’s theories regarding the notion of a “commons.”¹⁵³ Rose “defined a ‘commons’ as involving a set of assets or resources that importantly involve a set of social practices necessary for managing such resources.”¹⁵⁴ Rose used the framework of “‘comedy of the commons’ to describe how in situations involving ‘Common Pool Resources’ (CPRs) such as navigable waterways, beaches, roads and certain water resources, the consequences of common ownership/proprietorship of a CPR are salutary cooperation and maintenance of such a resource.”¹⁵⁵ Additionally Rose discussed a “limited commons” where for “defined members

¹⁴⁸ *Id.*

¹⁴⁹ Sunder, *supra* note 99, at 75.

¹⁵⁰ Keith Aoki, *Weeds, Seeds, & Deeds: Recent Skirmishes in the Seed Wars*, 11 CARDOZO J. INT’L & COMP. L. 247, 322-23 (Summer 2003).

¹⁵¹ *Id.* at 326 (stating “the institution of ‘property’ itself presents some alternate visions”).

¹⁵² *Id.*

¹⁵³ *Id.* at 325-26.

¹⁵⁴ *Id.* at 325 (citing Carol Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Mission Trades and Ecosystems*, 83 MINN. L. REV. 129 (1998)).

¹⁵⁵ *Id.* (citing Carol M. Rose, *Left Brain, Right Brain and History in the New Law and Economics of Property*, 79 OR. L. REV. 479 (2000)).

of a community, a resource is treated as a ‘commons,’ yet that same resource is treated as ‘private property’ with regards to outsiders.”¹⁵⁶

¶40 Using Rose’s theories, Aoki suggests that “[i]mplicit in the idea of a ‘limited commons’ . . . is the idea of ‘partial commodification’”¹⁵⁷ Aoki feels that the “Blackstonian” idea of exclusive property control by individuals is not how the majority of property is owned in the United States.¹⁵⁸ Rather, like a “limited commons,” “much of our social lives occur within jurisdictions or institutions premised on . . . types of co-ownership,” for example, “ownership interests in cooperatives, condominiums, homeowners associations, common interest communities, and other hybrid forms of joint ownership of property.”¹⁵⁹ Aoki also discussed that even when you deal with private ownership, there is public governance and regulations that private institutions or individuals must follow.¹⁶⁰ With public or private ownership regarding commonly owned resources, there is the idea of accountability and governance.¹⁶¹ Aoki asserts that viewing indigenous people as having property rights in their culture and knowledge as a limited commons—where the knowledge is public within the group, but private outside the group—would “shift the focus from ownership of resources to governance.”¹⁶² With this view property would be understood as governance and “democracy could be brought into important decisions involving seed germplasm, patented or otherwise.”¹⁶³ Accordingly, Aoki seems to be implying that viewing indigenous knowledge as a limited commons would allow incomplete commodification of indigenous knowledge in a manner that fits within already existing notions regarding shared public property and regulation of private property.

MADHAVI SUNDER’S THEORIES REGARDING INDIGENOUS PEOPLES’ PROPERTY RIGHTS

¶41 Madhavi Sunder, like Aoki, contends that when addressing new claims for new property rights people should not try to view them under already existing forms of property rights.¹⁶⁴

¶42 Instead, she suggests that indigenous peoples’ claims to intellectual property rights in their traditional knowledge is “[f]ar from being a simple story of intellectual property rights expanding into the public domain, [rather,] the new claims for property rights are struggles over the right to create one’s identity and to control cultural

¹⁵⁶ *Id.* at 325-26. (citing Carol Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Mission Trades and Ecosystems*, 83 MINN. L. REV. 129 (1998)).

¹⁵⁷ *Id.* at 326.

¹⁵⁸ *Id.* at 327.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 330.

¹⁶¹ *Id.* at 328.

¹⁶² *Id.* at 331.

¹⁶³ *Id.*

¹⁶⁴ SUNDER, *supra* note 105, at 171-72.

meanings.”¹⁶⁵ She discussed that historically, indigenous people have “not owned property—to the contrary, under traditional property law, their cultural products have been characterized as a commons and thus free for the taking for others to create property from their resources.”¹⁶⁶ Sunder observes that now, indigenous people are “asserting their right to be the subjects, not the objects, of property.”¹⁶⁷

¶43 Following Radin’s view of incomplete commodification, Sunder suggests that fear that property in personhood or culture would restrict the free flow of information and ideas within and between cultures could be alleviated by “recognizing new claims for property in personhood while protecting against their excesses.”¹⁶⁸ She refocuses the issue and suggests that “problems with property in personhood may not be the confluence of property and identity per se. Rather, the problem is that current claims often represent a confluence of bad identity politics and bad intellectual property.”¹⁶⁹ The problem is that “claims for property in personhood . . . are too often premised upon outmoded, essentialized view of identity, culture or property”¹⁷⁰ where people view culture as “static, bounded, homogenous and . . . to be protected against influence and interaction” and view property rights under Blackstone’s terms.¹⁷¹ Sunder recognizes that these ideas regarding cultures could have harmful consequences on people subordinated within a culture but states that these views regarding property are not accurate in the modern world.¹⁷² Rather, “[m]odern property is conceived as a complex and dynamic set of legal rights and responsibilities among various social actors.”¹⁷³ According to Sunder, if property in personhood is premised on modern notions of property and culture, regimes could be created to protect their property rights without the feared problems arising.¹⁷⁴ Modern “property law attempts to negotiate . . . relations among neighbors; . . . competing interests of present owners . . . and future owners; individual rights versus those of a community; and private interests in incentives and rewards versus rights of access for the public.”¹⁷⁵ “Rather than default into a suspicion of new identity-based claims to intellectual property,” Sunder feels that “we might better spend our time thinking creatively about creating just

¹⁶⁵ *Id.* at 168.

¹⁶⁶ *Id.* at 168-69.

¹⁶⁷ *Id.* at 169.

¹⁶⁸ *Id.* at 169-70.

¹⁶⁹ *Id.* at 170.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *See id.* at 171.

¹⁷⁵ *Id.* at 172.

property regimes and paying more heed to the changing substantive needs and desires of individuals and communities.”¹⁷⁶

PROPOSED SOLUTION

¶44 Based on these scholars’ commodification theories and the different proposed legal protections, I propose that employing a combination of legal protections is the best way to protect indigenous peoples’ rights and traditional knowledge. Primarily, developing nations should enact sui generis laws that recognize a property right in indigenous peoples’ traditional knowledge regarding medicinal remedies or agriculture. This law would best protect the community if it employed Ghosh’s trust model and if the nation formerly recognized the property right in a public document kept on file with the government—similar to a patent, which would be considered a “published” document. Implementing this law under the trust model would ensure indigenous groups have equal bargaining power by providing a knowledgeable bargaining agent. To help prevent some of the problems with “trusting the trustee,” fiduciary responsibilities and liabilities similar to those in the United States should be imposed on the trustee, whether it is a government officer or entity or a nongovernmental organization. Furthermore, under these laws, even if the indigenous group could not obtain patent protection on an international scale, they would still have a cause of action in their own country if the organization violated their property rights. They would be able to demand compensation or royalties for the use of their knowledge and negotiate resource use restrictions. Additionally, if the nation recognized the property right in a public document, this document then could potentially anticipate inventions of United States applicants because it would be published foreign knowledge.¹⁷⁷ Developing nations also should promote awareness of indigenous peoples’ rights stemming from their valuable knowledge, and the trustee should invoke trade secret protection whenever possible to prevent the misappropriation and misuse of indigenous peoples’ knowledge.

¶45 This approach would have several advantages including helping prevent unjust enrichment and cultural theft. Furthermore, indigenous people would be empowered and would have a means to obtain monetary compensation if outsiders misused their knowledge or resources. Indigenous people also would have a means to protect their resources and control the use of their resources. However, in our imperfect world, several disadvantages would still exist under this approach. By enacting property laws, the developing nations would

¹⁷⁶ *Id.* at 172-73.

¹⁷⁷ *See* 35 U.S.C. § 102.

impose Western ideas and economic mentality on indigenous groups whose societies are based on communal sharing of resources and whose knowledge, in many cases, has spiritual value rather than commercial value within the indigenous community. However, under Aoki's view of a limited commons, implementing the trust system may not be *that* harmful to indigenous peoples' way of life if it is treated as a limited commons. Within a community itself, the rights and use of traditional knowledge would not necessarily need to change, but the outside world would not have open access to the information and would have to respect an indigenous community's rights and the developing nation's laws.¹⁷⁸

¶46 Finally, many concerns discussed by scholars regarding the complete commodification of culture would not be realized if nations allowed the incomplete commodification of culture by giving indigenous people a property right in their traditional medicinal or agricultural knowledge. Due to the very nature of traditional knowledge, its incomplete commodification would not cause cultures to become static, cause oppression of people in the community or necessarily limit the free exchange of ideas if the community had some control over the use of their knowledge and resources. Incomplete commodification would be the “second-best” choice when the “first-best” choice—free use of cultural knowledge and practices without developed nations taking advantage of underdeveloped nations—is presently unattainable in our imperfect world.

¹⁷⁸ See *supra* text pp. 26-27 and accompanying footnotes.