

THE UNEASY CASE FOR INTELLECTUAL PROPERTY RIGHTS IN TRADITIONAL KNOWLEDGE*

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I. INTRODUCTION

Should intellectual property law protect traditional practices, folkways, performances, and expertise? In recent years, individuals and firms have patented customary herbal remedies, employed snippets of traditional songs and dances in copyrighted material, and even obtained yoga-related patents, copyrights, and trademarks.¹ These acts and others have led to claims that "traditional knowledge" ("TK") ought to be protected by both international and domestic law. Roughly, TK is the understanding or skill possessed by indigenous peoples pertaining to their culture and folklore, their technologies, and their use of native plants for medicinal purposes. Efforts to enshrine TK protection in the law can be seen in the recent activities of the World Intellectual Property Organization (WIPO), the United Nations Human Rights Council, and many other international and national bodies. These efforts, which concentrate almost exclusively on the knowledge of indigenous peoples, mirror a widely-held view that such knowledge is improperly disfavored by the existing system of intellectual property ("IP"). Providing legal protection for TK is seen as an essential corrective for the international community as well as individual nations to undertake.

Indigenous groups clearly possess extensive knowledge about the world around them, and much of that knowledge is traditional in nature. They also possess elaborate cultural and reli-

¹ Suketu Mehta, *A Big Stretch*, N.Y. TIMES, May 7, 2007, at A21.

gious traditions and practices. Hence, it is undeniable that TK exists, and indeed has existed for some time. In many cases, this TK is protected by the traditional norms and rules of indigenous communities. The current controversy is over whether, and, if so, how to grant protection to TK as a matter of international and national law.

Proponents of a new legal regime for TK often invoke concepts of property in their defense. To denounce "biopiracy" and the plunder of TK assumes that what was pirated or plundered is property.² A recent report by WIPO, for instance, states that "holders of TK should be entitled to fair and equitable sharing of benefits arising from the use of their knowledge."³ This statement likewise presupposes that the benefits of knowledge or the knowledge itself, or both, are property to be shared among TK holders. Proponents suggest that the legal protection of TK will serve several important goals. These include promoting respect for TK; deterring the misappropriation of TK; empowering TK holders, who are typically marginalized indigenous peoples; and protecting tradition-based innovation. The existing IP system is said to be unable to meet the needs of TK holders; as a result, extensive legal change is required.⁴ Some of the literature on TK takes as self-evident the proposition that TK ought to be protected, and focuses instead on how to do so: to revamp the patent system, to create *sui generis* rights via international treaties, to build global databases of TK that can be used to block patent applications, and so forth. Other analysts consider the more basic question of whether IP protection is in order. And still others contend that IP protection for at least some TK is contrary to how many indigenous communities conceive of their cultural heritage.

In this Article we examine the growing effort to protect TK. Our interest is in the fundamental question of whether, and if so

² See VANDANA SHIVA, *BIOPIRACY: THE PLUNDER OF NATURE AND KNOWLEDGE* (1997); VANDANA SHIVA, *PROTECT OR PLUNDER? UNDERSTANDING INTELLECTUAL PROPERTY RIGHTS* (Zed Books 2001). See also Kristen A. Carpenter, Sonia K. Katyal & Angela R. Riley, *In Defense of Property*, 118 YALE L.J. (forthcoming 2009) (using a "stewardship" (rather than an "ownership") theory of property in an effort to justify "cultural property," which includes some TK).

³ WIPO, *Intellectual Property and Traditional Knowledge, Booklet No. 2*, 11, available at http://www.wipo.int/freepublications/en/tk/920/wipo_pub_920.pdf. For a fine survey of WIPO, see SILKE VON LEWINSKI, *INTERNATIONAL COPYRIGHT LAW AND POLICY* 409-557 (2008). Many non-governmental organizations criticize the WIPO approach as too tentative. See, e.g., CTR. FOR INT'L ENVTL. LAW, *THE GAP BETWEEN INDIGENOUS PEOPLES' DEMANDS AND WIPO'S FRAMEWORK ON TRADITIONAL KNOWLEDGE* (Sept. 2007), available at http://www.ciel.org/Publications/WIPO_Gap_Sept07.pdf.

⁴ See INTERGOVERNMENTAL COMM. ON INTELLECTUAL PROP. AND GENETIC RES., WIPO, *REVISED DRAFT PROVISIONS FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE: POLICY OBJECTIVES AND CORE PRINCIPLES* (Jan. 9, 2006), available at http://www.wipo.int/tk/en/consultations/draft_provisions/pdf/draft-provisions-booklet-tk.pdf.

data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means," and a government or firm gets an entirely new *sui generis* IP right in the database each time it makes a "substantial change" to the database.¹⁰ Frequently, this new right is unjustifiable, because there is often little added value to the database. Patents are also sometimes awarded in dubious cases. As the patent term waned on the anti-cancer drug Gleevec, the owner received a U.S. patent on a "beta crystal" formulation of Gleevec and then applied for a similar Indian patent. In 2006 an Indian official correctly ruled that the new formulation was not patentable subject matter, for it was "only a new form of a known substance without having any significant improvement in efficacy."¹¹ The GI and database examples involve misguided rules, whereas the patent example involves a misguided effort to subvert a reasonable rule of patent law. Though our focus in this Article is on TK, we view all these efforts with substantial skepticism.

Our limited support for TK rights also reflects a concern about the identity of the rightholders. Were extensive legal rights over TK created for indigenous peoples, we know of no articulated plausible principle by which to limit the use of this protection by other groups. Consequently, we argue that advocates of TK rights must not only develop a sound justification for the protection of TK as a form of property. They must also provide a satisfactory account of why the TK of indigenous peoples, and not other practices and forms of collective or incremental knowledge of other groups, ought to receive legal protection.

Finally, we stress that our analysis concentrates on philosophically prominent theories of property, including theories of IP.¹² The philosophy of property, as understood here, is more restrictive than any and all arguments that justify a right that works like a property right. In other words, it may be possible to develop a compelling case for TK protection that draws on other founda-

¹⁰ Council Directive 96/9/EC, art. 1, ¶ 2; art. 10, ¶ 3, 1996 O.J. (L 077) 20-28 (EC), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996L0009:EN:HTML>.

¹¹ Novartis AG, Switzerland v. Cancer Patients Aid Ass'n, India, Order No. 151205, Jan. 25, 2006 (interpreting and applying The Patents Act, No. 39 of 1970, § 3(d) (India), as amended by The Patents (Amendment) Act, No. 15 of 2005, § 3 (amending § 3(d))).

¹² There is a growing legal literature on how different sorts of IP relate to different sorts of non-intellectual property. Compare, e.g., Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1032 (2005) (arguing that it is "a mistake as a practical matter" to treat "intellectual property 'just like' real property") with, e.g., Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1745 (2007) (proposing that "intellectual property's close relationship to property stems from the role that information costs play in the delineation and enforcement of exclusion rights"). Most of this literature is only tangentially relevant to the argument of this Article.

tions, such as distributive justice or human rights.¹³ But only a very limited form of TK protection can be supported by standard philosophical theories of property. Consequently, efforts at more extensive TK protection, if they succeed, will require a substantial deviation from such theories and substantial changes to existing IP law.¹⁴

II. SPECIFYING ROBUST LEGAL PROTECTION FOR TRADITIONAL KNOWLEDGE

To say that TK ought to receive legal protection is not enough to specify what the holder of that TK ought to have. It is necessary to know how strong the legal protection is. To this end we employ Wesley Hohfeld's famous quartet of claim-rights, liberty-rights (privileges), powers, and immunities, together with their correlatives and opposites.¹⁵ One must specify the package of "rights" to be ascribed to TK holders to analyze rigorously the protection of TK. The word "rights" is used in many different ways, and Hohfeld thought that the failure to distinguish among them breeds confusion. A useful way to clarify matters employs his analytical vocabulary.

A. Legal Modalities and Their Analysis

Hohfeld's analysis treats certain legal concepts as basic and explicates their interrelations. He stresses that the only proper use of the word "right" is that in which there is a corresponding duty on someone else,¹⁶ and that to employ it in other ways is indefensible "looseness of usage."¹⁷ Table 1 helps in understanding Hohfeld's basic concepts, which he calls "fundamental legal conceptions." These are the eight items in the elements and correlatives columns.

¹³ To preserve focus, we do not consider provisions in human rights treaties or theories that would make property a human right. See, e.g., Org. of Am. States, American Convention on Human Rights, Nov. 22, 1969, art. 21, (enumerating three rights pertaining to property), available at <http://www.cidh.oas.org/Basicos/English/Basic3.American%20Convention.htm>; Peter-Tobias Stoll & Anja von Hahn, *Indigenous Peoples, Indigenous Knowledge and Indigenous Resources in International Law*, in INDIGENOUS HERITAGE AND INTELLECTUAL PROPERTY: GENETIC RESOURCES, TRADITIONAL KNOWLEDGE AND FOLKLORE 7, 21-30 (Silke von Lewinski 2d ed., Wolters Kluwer 2008) [hereinafter INDIGENOUS HERITAGE].

¹⁴ This Article has three main constituencies: intellectual property lawyers, legal and political philosophers of property, and persons concerned specifically with TK. To make the Article easily accessible to all three constituencies, Parts II and III lay out the basic concepts and background clearly. If you are already well versed in this material, you may proceed directly to Part IV.

¹⁵ WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING (Walter W. Cook ed., Greenwood Press 1978).

¹⁶ *Id.* at 35-41.

¹⁷ *Id.* at 36.

TABLE 1. *Hohfeld's Fundamental Legal Conceptions*

Elements	Correlatives	Opposites
Claim-Right	Duty	No-Right
Privilege (Liberty)	No-Right	Duty
Power	Liability	Disability (No-Power)
Immunity	Disability	Liability

Source: STEPHEN R. MUNZER, A THEORY OF PROPERTY 19 (1990)

For Hohfeld, a correlative involves two-way entailment—that is, entailment in both directions between two statements. The statement that X has a claim-right to \$500 from Y entails, and is entailed by, the statement that Y has a duty to pay \$500 to X. Quite different from a claim-right (or, as Hohfeld usually says, a “right” or “claim”) is a privilege. A privilege is a liberty or liberty-right, where each of these terms is equivalent. The correlative of a privilege is the absence of a claim-right of opposite tenor. The statement that X has a privilege to walk across Y’s land, for example, entails and is entailed by the statement that Y has no claim-right to prevent X from walking across Y’s land.

A claim-right also differs from a power, whose correlative is a “liability” (a susceptibility to having one’s legal position changed by someone else). For instance, the statement that X has a power to transfer a copyright to Y by executing certain legal documents entails, and is entailed by, the statement that Y has a liability to become the owner of the copyright as a result of X’s executing these documents. Finally, a claim-right differs from an immunity, which is a lack of susceptibility to having one’s legal position altered by someone else. The correlative of an immunity is the absence of a power (that is, a “disability” or “no-power,” which Hohfeld uses interchangeably), not the existence of a duty. To illustrate, the statement that X has an immunity against the government’s compelling X to sell her farm to the government entails, and is entailed by, the statement that the government has no power to compel X to sell her farm to the government.

Hohfeld’s notion of an “opposite” concerns external rather than internal negation. For illustration, focus on the second row of Table 1, which presents privilege and duty as opposites of each other. Suppose that Y has a duty to pay \$500 to X. The opposite is not the internal negation: Y has a duty not to pay \$500 to X. Instead, the opposite is the external negation: It is not the case that Y has a duty to pay \$500 to X. Because an absence of a duty of opposite tenor is a privilege, the external negation is equivalent to

the following statement: Y has a privilege to pay \$500 to X.¹⁸ Hohfeld’s vocabulary has some limitations.¹⁹ These are not pertinent to the present inquiry. We proceed to put his analysis to work.

B. Legal Protection of Traditional Knowledge

We call a package of IP rights for TK “robust” if it contains all or almost all of the nine items listed below. The robust package set forth lacks the detail of, and is not intended to be, a statute. It is nonetheless wholly appropriate for our purposes in this Article.²⁰

No precise cutoff separates a robust from a modest package. The absence of one item does not drop the package from robust to modest, but if several are absent, the package is no longer robust. We argue, however, that many items in the following list are not justifiable, including much of (2), (3), (4), (7), (8), and (9). If that argument is sound, then the package of TK rights justifiable by existing theories of property would not even be modest—it would be weak.

A Robust Package of Legal Protection for TK

- (1) An indigenous people holds their various claim-rights and liberty-rights communally and has the power to override or nullify some actions by their members.
- (2) An indigenous people has a claim-right to
 - (a) their traditional medicines and health practices, including a claim-right to state protection of minerals, plants, and animals used in these medicines and practices;
 - (b) their folklore, folk art, crafts, techniques, and

¹⁸ The exposition in the last four paragraphs largely follows STEPHEN R. MUNZER, A THEORY OF PROPERTY 17-19 (1990).

¹⁹ See *id.* at 19-21 (identifying limitations).

²⁰ The sources cited *infra* in notes 24, 47, & 95 influence the package. For the idea that individual members of an indigenous group could have no power to alienate TK without permission of the group, see John Moustakas, *Group Rights in Cultural Property: Justifying Strict Inalienability*, 74 CORNELL L. REV. 1179 (1989). See generally U.N. Econ. & Soc. Council [ECOSOC], Subcomm. on the Promotion & Prot. of Human Rights, Comm. on Human Rights, *Human Rights of Indigenous Peoples, Report of the Seminar on the Draft Principles and Guidelines for the Protection of the Heritage of Indigenous Peoples*, U.N. Doc. E/CN.4/Sub.2/2000/26 (June 19, 2000); Draft Treaty on Access to Knowledge, art. 4-1(b)iii, May 9, 2005, available at http://www.cptech.org/a2k/a2k_treaty_may9.pdf (patents do not cover “[a]ny invention developed through the use of biological material if the inventor failed to obtain prior informed consent of the country of origin, or fails to fairly and equitably share the benefits derived from the use of that biological material”). To the objection that standard IP rights such as copyrights and patents do not satisfy the robust package, we reply that the suggested package is specific to TK, that it represents what most TK advocates seek, and that part of our point is that TK advocates often seek stronger legal protection than is available for other IP rights.

knowledge;

- (c) the biodiversity of their region; and
- (d) their genetic material, bodily fluids, and tissues.

(3) An indigenous people has the power to create rules binding on others for access to the items listed in (2), including physical samples and audio, visual, written, or electronic records of these items.

(4) Individual members of an indigenous people have a liberty-right and a power to grant access to the items listed in (2) so long as the leaders of the indigenous people, or the indigenous people acting as a whole, have not limited this liberty-right and power.

(5) An indigenous people and its members have a claim-right to receive just compensation for granting, after giving informed consent, access to the items listed in (2).

(6) If just compensation is not received, or if prior informed consent is not obtained, an indigenous people or its members have a claim-right to, and a power to seek, royalties, compensatory damages, and equitable relief, and the state has a power and a duty to fine or prosecute the offenders.

(7) With respect to copyrights and patents protected by the laws of host states or other states, an indigenous people and their members have powers to

- (a) exempt their folkloric works from the usual copyright requirement of being fixed in a tangible medium of expression;
- (b) prevent others from copyrighting or using their folkloric works; and
- (c) prevent the patenting and use of their medicinal compounds by non-indigenous persons by establishing the prior invention and use of these compounds in any relevant indigenous language.

(8) An indigenous people has an immunity against expropriation of the items listed in (2) by the host state.

(9) The foregoing claim-rights, liberty-rights, powers, and immunities are of indefinite duration, unless an indigenous people exercises a liberty-right and power to limit their duration with due appreciation of the consequences.

III. UNDERSTANDING TRADITIONAL KNOWLEDGE

A. Debates over Traditional Knowledge

The most common varieties of IP protected in modern legal systems are patents, copyrights, trademarks, and trade secrets. To

this list some might add geographic indications, such as "Champagne," and rights of publicity, such as the right of Tiger Woods to control the use of his image in advertising.²¹ Some might also add rights in TK. These latter topics are the subject of great dispute precisely because they are "non-standard" forms of property.

As a result, debates over TK differ from those over most other forms of IP in several respects. At least in the United States, debates about patents, copyrights, trademarks, and trade secrets tend to center on their economic value.²² Only occasionally do they involve concerns about specified ethnic or racial groups and their historical claims. TK debates, by contrast, revolve around the rights of indigenous peoples and the history of their treatment by dominant groups. Geographical indications ("GIs") are somewhat closer to TK in this respect, because both involve authenticity and groups—for example, the winemakers of Champagne and the South Asian users of neem oil. Yet, the conditions for membership in a group authorized to use a GI depart radically from those in a TK-group. A GI-group usually consists of artisanal producers in a particular area, often in developed regions such as Europe, whose movement in or out of the area determines their right to use the GI. A TK-group usually consists of indigenous peoples who have a common culture that has endured since the first contact with the West. Thus, the ugly history of colonialism is central to debates over TK but marginal with respect to GIs.

The cultural aspects of TK are also important. Some indigenous peoples seek legal protection for their TK as a way to prevent outsiders from using local knowledge, with or without compensation, because the knowledge is important to them for cultural or spiritual reasons. At the same time, some claims of TK attempt to benefit from the global extension of IP that powerful nations, in particular the United States, have led over the last decade. Thus debates over TK are largely about IP, and here, arguments for justifying property rights are central. These debates are also partly about the effects of colonialism and globalization and the problem of global justice. Here quite different arguments take center stage. Again, our focus in this Article is on property, and whether

²¹ On geographic indications, see Raustiala & Munzer, *supra* note 9.

²² By contrast, civil law systems are shot through with non-economic concerns stemming from the idea of the moral right of the author/creator. See *infra* text accompanying notes 88-94, 102, 191. This contrast is especially evident in French law on copyright and even trademark. Compare *Louis Vuitton Malletier S.A. v. eBay, Inc.*, Tribunal de Commerce [Commercial Court] Paris, Première Chambre B, June 30, 2008, No. 2006077799 (holding eBay liable for 40 million euros for damage to the reputation of trademarks owned by Louis Vuitton, including one million euros for "moral damage," caused by the sale of counterfeit products on eBay's website), with *Tiffany (NJ) Inc. v. eBay, Inc.*, 576 F. Supp. 2d 463 (S.D.N.Y. 2008) (holding that brand owners are ultimately responsible for protecting their own trademarks in regard to counterfeit goods sold on defendant's website).

leading theories of property can justify legal protection of TK.²³

B. *Traditional Knowledge Defined*

Traditional knowledge, more fully and carefully defined, is understanding or skill, which is typically possessed by indigenous peoples and whose existence typically predates colonial contact (typically with the West), that relates to medical remedies, plant and animal products, technologies, and cultural expressions.²⁴ The term "cultural expressions" includes religious rituals, sacred objects, rites of passage, songs, dances, myths, stories, and folklore generally. These forms of knowledge and cultural expressions are rarely frozen in time. Generally they evolve over decades and centuries.

The words "typically" and "the West" are important for picking out the context of current disputes over TK. Throughout human history, the transfer of knowledge and technology has occurred among all groups that have come in contact with one another. Thus has know-how about healing, plant breeding, animal husbandry, and weapons passed from group to group. So, too, have folklore and religious beliefs moved among groups. Often the know-how has come from an economically dominant group—think of China, silkworms, and the silk trade. Yet the contemporary debate about TK centers on economically subordinate groups, almost always indigenous peoples, and the movement of their understanding or skill to economically more powerful Western (or Westernized) groups or nations. It is possible to think of TK as living, evolving traditions, and often it has a dynamic character over time, but current disputes center on items of TK as they now exist.²⁵

²³ Beyond our scope are issues concerning whether "indigenous knowledge" is a better label than "TK," how indigenous-led groups differ from non-indigenous-led groups in advocating TK, and whether failing to protect TK by law has a disproportionate impact on women and their know-how.

²⁴ See Graham Dutfield, *TRIPS-Related Aspects of Traditional Knowledge*, 33 CASE W. RES. J. INT'L L. 233, 240 (2001); Srividhya Ragavan, *Protection of Traditional Knowledge*, 2 MINN. INTELL. PROP. REV. 1, 4 (2001). The terms "traditional knowledge" and "TK" have descriptive and normative uses. Descriptively, the terms apply to understanding or skill as just defined. Normatively, they apply to a variety of intellectual property that is, or ought to be, protected under domestic and international law. Despite the ambiguity between descriptive and normative uses, in this Article it would be tedious to point out which is meant on each occurrence of these terms. The context ordinarily suffices to make clear which is intended. Just bear in mind that no one claims that TK (descriptive) fails to exist. The key issues involve whether TK (normative) does or ought to exist and, if so, on what grounds.

²⁵ The foregoing definition of "TK" leaves the term "indigenous peoples" undefined. The Draft United Nations Declaration on the Rights of Indigenous Peoples of 1994 does not define it either. U.N. Doc. E/CN.4/Sub.2/1994/56 (Aug. 26, 1994). Those seeking a definition will not find much help in International Labour Organisation, Convention concerning Indigenous and Tribal Peoples in Independent Countries, No. 169, June 27, 1989. The Convention states to whom it applies in article 1, section 1, but then retreats by

As explained above, a claim of TK protection can be used offensively or defensively.²⁶ Claimants employ TK *offensively* if they want the economic value that would result from IP protection. In other words, offensive uses are aimed at propertizing TK so as to market it in some fashion. So-called "bioprospecting" is a leading example: akin to mineral prospecting, its goal is useful germplasm rather than, say, gold or uranium. Bioprospecting is sometimes done with a written agreement, which may take the form of a standard bilateral contract between any two of the following parties: an indigenous plant provider, a botanical collector, an agency of a developing country, and a pharmaceutical firm. David Downes and his colleagues provide a draft agreement between a collector and a pharmaceutical firm with indigenous providers as third-party beneficiaries who may receive royalties or other benefits.²⁷ Other, more complicated arrangements involve linked contracts, trusts for indigenous peoples, and multinational pacts. In all of these cases, TK is traded in order to gain other assets from outsiders. In such arrangements a key policy issue is how to make sure that indigenous peoples receive an appropriate share of the benefits.²⁸

saying that "[s]elf-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which this Convention apply" in section 2. Clearly, it is politically tricky to say who is indigenous and who is not. Cf. Benedict Kingsbury, "Indigenous Peoples" in *International Law: A Constructivist Approach to the Asian Controversy*, 92 AM. J. INT'L L. 414, 415 (1998) (observing that the term "indigenous peoples" lacks a generally agreed meaning and preferring a "constructivist" over a "positivist" approach to "capture[] its functions and significance"). For purposes of this Article, an "indigenous people" is a transtemporal cultural group whose members have lived in a subregion of a country or countries prior to conquest or colonization, who are a small minority of and to some extent isolated from the main populations of that country or countries, and who have distinctive social, linguistic, and political features.

²⁶ We use the phrase "a claim of TK protection" advisedly because such a claim need not be a claim of a *property* right in TK to be useful in the defensive manner we describe. If a patented invention can be shown to be sufficiently similar to knowledge that is descriptive TK, and that knowledge passes certain threshold conditions (for instance, publication), then the patent may be invalidated on the ground that the contained invention was already in the public domain.

²⁷ See David Downes et al., *Biodiversity Prospecting Contract*, in BIODIVERSITY PROSPECTING: USING GENETIC RESOURCES FOR SUSTAINABLE DEVELOPMENT 255-87 (Walter V. Reid et al. eds., 1993). For other sorts of bioprospecting agreements, see Kerry ten Kate & Sarah A. Laird, *Bioprospecting Agreements and Benefit Sharing with Local Communities*, in POOR PEOPLE'S KNOWLEDGE: PROMOTING INTELLECTUAL PROPERTY IN DEVELOPING COUNTRIES 133 (J. Michael Finger & Philip Schuler eds., 2004) [hereinafter POOR PEOPLE'S KNOWLEDGE].

²⁸ Vandana Shiva is perhaps the most prominent critic of bioprospecting. In addition to her books cited *supra* in note 2, see Vandana Shiva, *Bioprospecting as Sophisticated Biopiracy*, 32 SIGNS: J. OF WOMEN IN CULTURE & SOC'Y 307 (2007). Other critics include, in the same symposium issue as Shiva, Susan Hawthorne, *Land, Bodies, and Knowledge: Biocolonialism of Plants, Indigenous Peoples, Women, and People with Disabilities*, 32 SIGNS: J. OF WOMEN IN CULTURE & SOC'Y 314 (2007); Ana Isla, *An Ecofeminist Perspective on Biopiracy in Latin America*, 32 SIGNS: J. OF WOMEN IN CULTURE & SOC'Y 323 (2007). See also most of the authors in THE CATCH: PERSPECTIVES IN BENEFIT SHARING (Beth Burrows ed., 2005). Subtler but still critical are CORI HAYDEN, WHEN NATURE GOES PUBLIC: THE MAKING AND UNMAKING OF BIOPROSPECTING IN MEXICO (2003), who uses actor-network theory in her analysis, and KAUSHIK SUNDER RAJAN, BIOCAPITAL: THE CONSTITUTION OF POSTGENOMIC LIFE (2006), whose book bears the influence of Marx. It would take us off track to dissect these critical

In other cases claimants employ TK *defensively* to block the enforcement of or to invalidate another variety of IP, such as a patent, owned by outsiders who used TK in forging the patented invention. A paradigmatic example is a pharmaceutical patent that relies in part on TK, obtained without consent, for its genesis. In 1994 the European Patent Office granted a patent on a neem-oil-based fungicide, which elicited protests from India, where neem has long been used as a traditional remedy.²⁹ Opponents successfully challenged the patent by arguing that it did not display an inventive step but simply mirrored centuries-old traditional knowledge within India.³⁰ In 2000 the European patent was revoked.³¹ Defensive employments of TK may also rest on the belief that certain TK, perhaps because it is sacred, should either not be owned at all or at least not be owned by those outside the indigenous group.

C. Traditional Knowledge, Law, and International Politics

Indigenous groups have long recognized something akin to TK, and in the Western tradition the analogous concept of folklore is well established. It is the global dimension of property rights in TK that has evolved markedly in the last decade.³² There are many reasons for this newfound attention. In the 1980s, the rise of knowledge-based economies raised the economic importance of IP internationally. Technological advances also made copying of many IP-protected products far easier, which spurred producers in the United States and elsewhere to demand greater legal protection globally. In the wake of these changes, IP rights have steadily expanded.

Although international cooperation to protect IP has a long history, never before has IP been such a central part of world politics. In recent decades the United States, Europe, and Japan have sought to extend their IP laws globally. They have done so both through multilateral trade agreements, such as those encompassed by the WTO, and by the traditional approach of relying on discrete treaties on patent, copyright, and the like. The insertion of IP into the WTO agenda has been the source of great controversy, and has moved the politics of IP to the forefront of debate in many quarters.³³ Many actors have vigorously, but largely unsuccessfully, opposed this global extension of Western-style rights.

perspectives here.

²⁹ See BERNARD O'CONNOR, *THE LAW OF GEOGRAPHICAL INDICATIONS* 363-64 (2004).

³⁰ *Id.*

³¹ *Id.*

³² See MICHAEL P. RYAN, *KNOWLEDGE DIPLOMACY: GLOBAL COMPETITION AND THE POLITICS OF INTELLECTUAL PROPERTY* (1998); SUSAN K. SELL, *PRIVATE POWER, PUBLIC LAW: THE GLOBALIZATION OF INTELLECTUAL PROPERTY RIGHTS* (2003).

³³ RYAN, *supra* note 32; SELL, *supra* note 32.

They have argued that strong IP rights either harm the developing world, as when they raise the costs of medicines, or disproportionately benefit advanced industrial democracies, whose citizens and firms hold most patents, trademarks, and copyrights. The fact that international IP law is in flux yields a political opening for advocates of TK protection.

The increased political salience of TK is thus the result of major changes in the global economy. The increased propensity of groups to assert TK as an IP right also relates to recent changes in political awareness and tactics among indigenous peoples. Indigenous peoples increasingly cooperate globally on a range of shared issues, such as land tenure and language preservation.³⁴ Critics of Western-style IP law frequently make connections between TK and traditional imperialism. One critic, for example, states that "[t]he range of Western beliefs that define intellectual and cultural property laws . . . are not universal values that express the full range of human possibility, but particular, interested fictions emergent from a history of colonialism that has disempowered most of the peoples on this planet."³⁵ This statement adds political force to the views of many TK holders, who seek to challenge Western IP principles as a new form of imperialism.

The revoked European patent on a neem oil-based fungicide nicely illustrates these criticisms. First, prior to the 1990s Indians would have been far less likely to know about foreign patents. The rise of global media and the internet have changed that. Second, in the past traditional users of the neem tree would have had little direct incentive to care about foreign patents. But globalization and the rise of international IP protection have again altered the calculus. The prospect that a European patentee might profit by selling neem-based products abroad, coupled with the moral claim that the neem patent was a form of theft, infuriated many Indians. Third, the expansion of patent rights through international agreements has raised the value of TK as an input into patents. The availability of patent protection for an enhanced traditional medicinal cure, for example, raises the value of the TK on which the innovation is based. This increase in TK value, though uncertain and variable, has led many to argue in favor of international TK protection.³⁶ In short, exogenous technological changes—in

³⁴ MICHAEL F. BROWN, *WHO OWNS NATIVE CULTURE?* (2003).

³⁵ Rosemary J. Coombe, *The Properties of Culture and the Politics of Possessing Identity: Native Claims in the Cultural Appropriation Controversy*, 6 CAN. J.L. & JURISPRUDENCE 249, 285 (1993).

³⁶ For more on the neem story and other instances of "biopiracy," see Philip Schuler, *Biopiracy and Commercialization of Ethnobotanical Knowledge*, in POOR PEOPLE'S KNOWLEDGE, *supra* note 27, at 159-81.

particular the development of various scientific techniques to identify genes, splice them, and sequence genomes—have made the leads provided by TK more valuable. These changes in turn raise the economic returns from successful assertions of TK.

D. *Traditional Knowledge and Intellectual Property*

What are the main differences between TK and other kinds of IP and what is the role of the public domain? Consider patents first. Governments award patents for certain inventions and discoveries that are new, useful, nonobvious in light of previous knowledge ("prior art"), and described in enough detail to enable others who are skilled in the art to make them. Patents are temporally limited—usually twenty years from the date of application.

According to almost all of its defenders, TK protection ought not be time-limited. Examples of TK that otherwise come closest to patents involve innovations that arise through incremental and collective processes that ordinarily span long periods of time. However, the know-how present in these innovations may never have been reduced to writing. If it has not, the "written description" and "enablement" requirements of patent law would be hard to satisfy. These collective innovations might not qualify as prior art, which in most patent systems could block others from gaining their own patents, because much TK is unpublished. In 2001, India moved to avoid the problem of unpublished TK through the Traditional Knowledge Digital Library ("TKDL"). The TKDL will contain around thirty million pages of Indian ancient and traditional knowledge translated into other languages and arranged according to the International Patent Classification.³⁷ Even if reduced to writing and published, however, these incremental innovations may only block Western patents rather than be patentable themselves.

Comparison with copyright is also instructive. A copyright is an IP right, not in ideas themselves, but in the original expression, fixed in a tangible medium, of ideas broadly understood. A copyright holder can sue anyone who reproduces the work without au-

³⁷ Oral TK is not prior art under U.S. law, though if the TK is placed in a published registry it meets the prior art threshold. The European Patent Office does not require publication of prior art. See WIPO INTERGOVERNMENTAL GOVERNMENT COMMITTEE ON INTELLECTUAL PROPERTY & GENETIC RESOURCES, TRADITIONAL KNOWLEDGE, AND FOLKLORE, PROGRESS REPORT ON THE STATUS OF TRADITIONAL KNOWLEDGE AS PRIOR ART, at 3, WIPO Doc. GRTKF/IC/2/6 (July 1, 2001). On the TKDL, see Soutik Biswas, *India Hits Back in 'Bio-Piracy' Battle*, BBC NEWS, Dec. 7, 2005, http://news.bbc.co.uk/2/hi/south_asia/4506382.stm; *India Works to Shield Traditional Knowledge from Modern Patents*, ONLINE NEWSHOUR, May 21, 2007, http://www.pbs.org/newshour/bb/asia/jan-june07/patents_05-21.html. For more on the TKDL, see *infra* text accompanying notes 127-30, 208.

thorization for damages or an injunction or both. Copyrights, like patents, are time-limited. This temporal limitation diverges from most proposals for TK rights. Moreover, TK, as usually understood by proponents, need not be fixed in a tangible medium such as a writing or drawing. TK, like other folklore, may also lack an identifiable author or set of authors.³⁸

Again, all patents and copyrights eventually end, and the protected creation enters the public domain. Current patent and copyright law generally treat TK as if it were already in the public domain; proponents of TK rights generally seek to take it out of the public domain, and to do so forever.

In our view, the public domain is best understood in this context as a normative status that confers a presumptive liberty-right and power to appropriate information that relates to existing inventions, works of art and literature, and all forms of TK.³⁹ Hohfeld's vocabulary facilitates discussion of the relevant presumptions and ways of rebutting them.⁴⁰ The presumptions that something belongs in the public domain or should eventually return to it can be rebutted in either of two ways: (i) by the exercise of a liberty-right and power of someone who currently possesses the information to keep it secret or disclose it to others only under mutually agreed upon terms, or (ii) by correctly invoking a constitutional, statutory, or judicial legal rule.⁴¹ The importance of the public domain rests on innovation concerns, because most innovations derive from earlier innovations, as well as liberty concerns, because private monopolies on innovations and expressions restrain free economic competition and may inhibit free expression. Maintaining a vibrant public domain is therefore an important, if often under-appreciated, goal of international IP law. For us, a public domain is "vibrant" if it includes many important modes of access, in the form of liberty-rights, claim-rights and powers, and if these liberty-rights, claim-rights and powers are frequently exer-

³⁸ U.S. copyright law sometimes covers works of unknown authorship if another identified person has reworked them in some fashion. An example would be a derivative-work copyright on a new translation of the Bible.

³⁹ For this understanding of the public domain, see Munzer, *supra* note 7. We would accept other definitions or accounts of "public domain" in other contexts and for other purposes. A salient virtue of Samuelson, *supra* note 7, is her flexibility in this regard: "Accepting the existence of multiple public domains offers several benefits." *Id.* at 823. Among them are avoiding needless and possibly fruitless debates over which definition is "true" or "correct"; achieving greater awareness of different public domains and the values attached to them; enabling context-sensitive uses of the term to develop; facilitating more nuanced response to issues raised in the literature; and gaining deeper understanding of public domain values by considering them from different viewpoints. See *id.* at 823-27.

⁴⁰ See *supra* text accompanying notes 15-19.

⁴¹ Clause (i) is related to PD 6 and clause (ii) includes PD 3 as understood by Samuelson, *supra* note 7, at 792-94, 799-804.

cised.⁴² From this perspective, rights of indefinite or perpetual duration hinder vibrancy and ought to be viewed with skepticism.

Our understanding of the public domain has two key features. First, the public domain has a presumptive nature that makes it a site for continuing debate.⁴³ The presumptions in clause (i) relating to a liberty-right, a claim-right, and power are first-order presumptions. Any presumption that something belongs in the public domain is a second-order presumption, for it rests on a normative status that involves first-order presumptions. Because what is in the public domain is a site for debate, it is not simply an open-access resource from which either individuals or groups may, without normative let or hindrance, withdraw units of the resource. Our understanding of the public domain is thus not prejudicial, as are some others, to indigenous peoples and their TK, because Westerners seeking to access TK must establish, by argument and debate, why they have any liberty-right or power to access this TK.

Second, we recognize that something can be in the public domain in some respects and outside it in others. The *sui generis* right known as *domaine public payant*, for example, recognizes entry into the public domain in one respect (end of copyright protection) but not in another (royalties still due to a different entity for an additional period of time).⁴⁴ As a different illustration, U.S. patent law does not regard whatever is "public" in the sense that something that it is or was known by someone as also "public" in the sense that it is a bar to patentability. Under certain conditions, it is possible to obtain a patent on a discovery or invention known

⁴² James Boyle, in BOYLE, PUBLIC DOMAIN, *supra* note 7 at 38-39, introduces spatial metaphors to separate the "absolutist" from his preferred "complex" or "granular" understanding of the public domain:

If one uses a spatial metaphor, the absolutist vision is a tessellated map. Areas of property are neatly delineated from areas of the public domain. Mozart's plot sits next to that of Britney Spears; one public, the other private. In the granular view, the map is more complex. Ms. Spears' is cut through with rights to make fair use, as well as with limitations on ownership of standard themes. Instead of the simple tiled map, the granular vision has private plots with public roads running through them.

We find Boyle's more complex spatial metaphor helpful in explaining the conditions for a vibrant public domain.

⁴³ Munzer, *supra* note 7 at 275, illustrates some of the arguments and debates that occur in the public domain. Among the "sites" where arguments and debates occur are towns and cities, within and between nations, in cyberspace, in business and trade negotiations, and in politics and academic institutions. This particular feature of the public domain and its "sites" is loosely akin to Habermas's account of the public sphere as a locus of conversation and contestation. *Id.* See, e.g., JÜRGEN HABERMAS, THE STRUCTURAL TRANSFORMATION OF THE PUBLIC SPHERE: AN INQUIRY INTO A CATEGORY OF BOURGEOIS SOCIETY (Thomas Burger trans., The MIT Press 1989) (though Habermas would be unsympathetic to many other features of our understanding of the public domain). For an astute use of a Habermasian approach to TK and bioprospecting, see HAYDEN, *supra* note 28, at 46-47, 230-36.

⁴⁴ See *infra* text accompanying notes 189-209.

or used abroad, or a discovery or invention that has been abandoned, suppressed, or concealed by an inventor in the United States, or a discovery or invention that falls under the doctrine of lost art.⁴⁵ Indeed, the fact that certain discoveries or inventions are known or used abroad, and yet possibly patentable in the United States, gives rise to some of the issues pertaining to TK.

This complex account of the public domain applies not only to patent and copyright but potentially also to trademark, trade secret, and *sui generis* rights in TK. Trademark generally has little in common with TK, though it is one of the very few IP rights that can be indefinite in duration. Firms use trademarks to distinguish their goods from those of competitors. The chief rationale for trademarks is to prevent consumer confusion, and trademarks can last indefinitely if firms continue to use them in marketing their goods and prevent others from using them. The public-domain issues pertaining to trademark are free speech, fair use, and assorted "commons," "communities" or "public domains."⁴⁶ Although trademarks and TK share the characteristic of indefinite life, TK often lacks associated words and symbols.⁴⁷ Furthermore, some indigenous groups may deem it utterly inappropriate to sell some items of TK, such as the groups' religious rituals and sacred objects. Hence the parallels are limited.

Finally, TK also differs from rights of publicity and trade secrets, though the latter is probably the closest conventional analogue. Publicity rights, pertaining as they do to the rights of indi-

⁴⁵ See 35 U.S.C. §§ 102(a)-(c), (g) (2006). We owe this illustration to Rochelle Cooper Dreyfuss. On lost art, see 35 U.S.C. § 102(g); *Gayler v. Wilder*, 51 U.S. (10 How.) 477 (1850) (holding that where the first inventor of a fire-proof safe lost the only embodiment of the invention and neither he nor the witnesses could remember how to make it, the second inventor could obtain a patent on the invention); 1 DONALD S. CHISUM, CHISUM ON PATENTS § 3.05 (2008) (supporting, with reservations, the doctrine of lost art); *infra* text accompanying note 149.

⁴⁶ See respectively Rochelle Cooper Dreyfuss, *Reconciling Trademark Rights and Expressive Values: How to Stop Worrying and Learn to Love Ambiguity*, in TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH 261 (Graeme B. Dinwoodie & Mark D. Janis eds., Edward Elgar 2008) [hereinafter TRADEMARK LAW AND THEORY] (free expression); Rebecca Tushnet, *Truth and Advertising: The Lanham Act and Commercial Speech Doctrine*, in TRADEMARK LAW AND THEORY, *supra*, at 294-323 (free speech); Graeme W. Austin, *Tolerating Confusion about Confusion: Trademark Policies and Fair Use*, in TRADEMARK LAW AND THEORY, *supra*, at 368-403 (fair use); PETER DRAHOS, A PHILOSOPHY OF INTELLECTUAL PROPERTY 57-58 (1996) (describing four types of "commons" or "communities"); Jennifer Davis, *Protecting the Common: Delineating a Public Domain in Trade Mark Law*, in TRADEMARK LAW AND THEORY, *supra*, at 345-67 (public domain).

⁴⁷ However, some indigenous peoples are beginning to come up with TK-related marks, and some legal systems now protect certain forms of TK, by trademark or even copyright, either through legislation or judicial decision. See POOR PEOPLE'S KNOWLEDGE, *supra* note 27, at 191 *passim*. For instance, Tiwi artists created an "authenticity label," and the Australian government recognizes such trademarks and certification marks. *Id.* at 191. U.S. law prevents the registration of a mark that is confusingly similar to "official insignia" of any Native American tribe. *Id.* at 217. Several Australian judicial decisions have invoked copyright law to protect carpet and textile designs created by aboriginal artists. *Id.* at 116-18, 187-89.

viduals to control the use of their own images, obviously differ from the *group* rights putatively involved in TK. Trade secrets are information that can be used in a commercial enterprise and that is sufficiently confidential and valuable to provide an economic advantage. The protection of secret business information, such as the ingredients in a perfume, dates back to Roman law but is mainly a nineteenth-century legal response to the technical knowledge and employee mobility of the Industrial Revolution.⁴⁸ The holder of a trade secret must make reasonable efforts to keep it confidential. Protection continues until the information becomes public knowledge—through, for example, independent discovery or reverse engineering by others. Hence trade secrets and TK have much in common. Both share the attribute of potentially unlimited duration, and both aim to keep some knowledge in private hands. Still, much TK involves information that is not commercial in character, and so TK as a category encompasses far more than does trade secret.

IV. PROPERTY ARGUMENTS FOR PROTECTING TRADITIONAL KNOWLEDGE

The term “traditional knowledge,” in its normative use, refers to a variety of IP. And the language of property grounds the efforts of many TK proponents. In this Part we investigate the major moral, political, and legal arguments philosophers often deploy to justify property and especially other varieties of IP, and explore how the protection of TK fares when considered in light of them.

A. Framing the Inquiry

To be fair, we assess the force of a wide range of possible justifications. We explore arguments that appeal to utility or efficiency only in some targeted form, such as an incentive to innovate or commercialize or to prevent confusion among consumers, rather than as a broad appeal to whatever maximizes, say, net preference-satisfaction across all individuals.⁴⁹ We state all possible justifications initially much as philosophers would but whenever possible go on to examine more concrete or nuanced versions that appear in the TK literature.⁵⁰

⁴⁸ See generally COHEN & GUTTERMAN, *supra* note 6.

⁴⁹ To forestall misunderstanding, we stress that all of the arguments we examine—including the arguments based on unjust enrichment and infringement/dilution—bring in legal concepts and the reasoning of IP lawyers only as a way of concretely expressing underlying arguments of moral, political, and legal philosophy.

⁵⁰ WIPO documents are a particularly good source of concrete and nuanced versions. See, e.g., WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional

We are mindful that proponents of TK might protest that the arguments considered below have a Western bias and therefore are stacked against TK protection. However, these arguments, even if they rest on Western philosophical approaches to property, must be addressed because proponents of TK generally seek protection in the form of IP rights under international law, and international IP law is strongly Western in orientation.⁵¹ Hence as a practical political matter, those who advocate robust TK rights need to show how the arguments and rules which they favor lend themselves to and fit within the existing framework of interna-

Knowledge & Folklore, *Report*, 1st Sess., WIPO Doc. WIPO/GRTKF/IC/1/13 (May 23, 2001); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Report*, 2d Sess., WIPO Doc. WIPO/GRTKF/IC/2/16 (Dec. 14, 2001); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Report*, 3d Sess., WIPO Doc. WIPO/GRTKF/IC/3/17 (June 21, 2002);); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Report on the Review of Existing Intellectual Property Protection of Traditional Knowledge*, 4th Sess., WIPO Doc. WIPO/GRTKF/IC/4/7 (Nov. 5, 2002) [hereinafter *WIPO Existing Protection Report*]; WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Report Adopted by the Committee*, 4th Sess., WIPO Doc. WIPO/GRTKF/IC/4/15 (Dec. 17, 2002); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Report*, 5th Sess., WIPO Doc. WIPO/GRTKF/IC/5/15 (Aug. 4, 2003); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Practical Mechanisms for the Defensive Protection of Traditional Knowledge and Genetic Resources within the Patent System*, 5th Sess., WIPO Doc. WIPO/GRTKF/IC/5/6 (May 14, 2003) [hereinafter *WIPO Practical Mechanisms*]; WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Composite Study on the Protection of Traditional Knowledge*, 5th Sess., WIPO/GRTKF/IC/5/8 (Apr. 28, 2003) [hereinafter *WIPO Composite Study*]; WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Information on National Experiences with the Intellectual Property Protection of Traditional Knowledge*, 5th Sess., WIPO Doc. WIPO/GRTKF/IC/5/INF/2 (Apr. 4, 2003); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Defensive Protection Measures Relating to Intellectual Property, Genetic Resources and Traditional Knowledge: An Update*, 6th Sess., WIPO Doc. WIPO/GRTKF/IC/6/8 (Dec. 15, 2003) [hereinafter *WIPO Defensive Protection Measures*];); WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Reproduction of Document WIPO/GRTKF/IC/9/4 “The Protection of Traditional Cultural Expressions/Expressions of Folklore: Revised Objectives and Principles,”* 12th Sess., WIPO Doc. WIPO/GRTKF/IC/12/4(c) (Dec. 6, 2007) [hereinafter *WIPO Folklore*]; WIPO Intergovernmental Comm. on Intellectual Prop. & Genetic Res., Traditional Knowledge & Folklore, *Roundtable on Intellectual Property and Traditional Knowledge*, WIPO Doc. WIPO/IPTK/RT/99/3 (Oct. 6, 1999) (prepared by Michael Blakeney) [hereinafter *WIPO Roundtable*]. See generally JÖRG REINBOHE & SILKE VON LEWINSKI, THE WIPO TREATIES 1996: COMMENTARY AND LEGAL ANALYSIS (2002); Wend B. Wendland, *Intellectual Property, Traditional Knowledge and Folklore: WIPO’s Exploratory Program (Part I)*, 33 INT’L REV. INDUS. PROP. & COPYRIGHT L. 485 (2002); Wend B. Wendland, *Intellectual Property, Traditional Knowledge and Folklore (Part II)*, 33 INT’L REV. INDUS. PROP. & COPYRIGHT L. 606 (2002).

⁵¹ There are exceptions. The farmers’ rights and global common-property regime established by the International Seed Treaty seeks to compensate actors for plant-related innovations, but it doesn’t do so through the granting of the standard IP rights of patent, copyright, and the like. This treaty, known formally as the International Treaty on Plant Genetic Resources for Food and Agriculture, entered into force on June 29, 2004, and is available at <http://ftp.fao.org/ag/cgrfa/it/ITPGRe.pdf> [hereinafter *FAO Seed Treaty*]. See *id.* at art. 9 (delineating farmers’ rights); arts. 10-13 (creating a multilateral system of access and benefit-sharing); Kal Raustiala & David G. Victor, *The Regime Complex for Plant Genetic Resources*, 58 INT’L ORG. 277 (2004) (discussing the rise of property rights in plant genetic resources via the International Seed Treaty).

tional IP law. At the very least it is important to know the degree to which strong TK rights would upend this existing framework. Although some may well contend that domestic and international IP law needs to be revised from the ground up⁵²—for the purposes of this Article we are agnostic on this issue—we suggest that absent such a legal revolution the case for robust IP rights in TK is unconvincing.

Two main points circumscribe our discussion. First, we take as central that a justification for TK rights should support rights of indefinite duration. We do so because TK advocates routinely stress indefinite duration and often point out that precisely in this way should normative TK differ from other IP rights. Indeed, it is implicit in the very concept of "traditional knowledge" that the knowledge in question is fairly old, and in many cases would, as a result, fall outside the bounds of ordinary IP rights.⁵³ The practical terms of the current debate over TK thus lead us to view indefinite duration as central.

Second, arguments based on distributive justice lie outside the scope of this Article, for two reasons.⁵⁴ One is the impossibility of examining such arguments in depth within a single article even of substantial length. There are many such principles, even among those limited to distributive justice within a given society or nation-state. There are even more if one examines principles designed to work internationally, as the burgeoning literature on global justice makes plain. A different reason is that the practical impact of principles of distributive justice on IP rights in TK is doubtful. There may be many grounds for redistributing resources to indigenous peoples. Yet it is far from obvious that robust IP rights in TK would be an effective means for doing so, for the economic value of these rights is apt to be highly variable across indigenous peoples. Many such rights, even if vigorously enforced, would likely have little economic value.

⁵² Vandana Shiva, in works cited *supra* in note 2, advocates such a revision. Cf. DARRELL A. POSEY & GRAHAM DUTFIELD, *BEYOND INTELLECTUAL PROPERTY: TOWARD TRADITIONAL RESOURCE RIGHTS FOR INDIGENOUS PEOPLES AND LOCAL COMMUNITIES* (1996) (surveying the limitations of standard IP rights for indigenous peoples and arguing for *sui generis* "traditional resource rights").

⁵³ Some might try to avoid the force of this point by stressing the TK involves living traditions or referring to "indigenous" knowledge. See *supra* note 23.

⁵⁴ See, e.g., ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA* 156 (1974) (using the phrase "patterned end-state principles" of distributive justice). Nozick's principle of historical entitlement in holdings is not patterned. *Id.* at 157. The difference principle in JOHN RAWLS, *A THEORY OF JUSTICE* 302 (The Belknap Press of Harvard Univ. Press 1971), is a patterned end-state principle. So is the principle of justice and equality—"that unequal property holdings are justifiable if (1) everyone has a minimum amount of property and (2) the inequalities do not undermine fully human life in society." MUNZER, *supra* note 18, at 227.

B. Assessing the Main Arguments for Intellectual Property Rights

1. Desert Based on Labor

A principle of desert based on labor finds favor among some philosophers of property.⁵⁵ 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.⁵⁶ 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.⁵⁷ Some philosophers, for example, argue that inheritance should be restricted.⁵⁸ 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

⁵⁵ See, e.g., LAWRENCE C. BECKER, *PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS* 48-56 (1977); Lawrence C. Becker, *Deserving to Own Intellectual Property*, 68 U. CHI.-KENT L. REV. 609 (1993). Becker and others recognize that Locke's famous discussion of property offers only thin support for a labor-desert principle. See JOHN LOCKE, *SECOND TREATISE OF GOVERNMENT* §§ 25-51, in *TWO TREATISES OF GOVERNMENT* 303-20 (Peter Laslett 2d ed., 1967). Such a principle is related, though, to Locke's argument that because no one would labor without expecting some benefit, it would be unfair to let the idle take "the benefit of another's Pains." *Id.* § 34.

⁵⁶ Cf. Robert P. Merges, *Locke for the Masses: Property Rights and the Products of Collective Creativity*, (Jan. 8, 2009) (unpublished manuscript), available at <http://ssrn.com/abstract=1323408> (arguing that a Lockean theory of property rights might be able to accommodate collective projects, such as Wikipedia, that assemble manifold small contributions by geographically dispersed contributors).

⁵⁷ See, e.g., MUNZER, *supra* note 18, at 276-79, 395-96.

⁵⁸ See, e.g., JOHN STUART MILL, *PRINCIPLES OF POLITICAL ECONOMY* 226-27 (William Ashley ed., Augustus M. Kelley 1976) (seeking to limit inheritance).

(gifts, bequests, and intestate succession) are in order.⁵⁹

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.⁶⁰ 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.⁶¹

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.⁶² 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

⁵⁹ See MUNZER, *supra* note 18, at 276-78, 380-418.

⁶⁰ *Id.* at 217-18, 286-87, 397-402.

⁶¹ E.g., Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L.J. 1 (2000).

⁶² Existing law may not afford or make it easy to exercise such a right. The Pueblo Indians performed a sacred ceremonial dance. A newspaper photographer flew over a performance of the dance without permission and in 1984 *The Santa Fe New Mexican* published photographs of the performance. The Pueblo sued the newspaper. Because the "choreography" was not written down, U.S. copyright law did not protect the Indians' rights in the dance, though state common law may protect rights in a live performance. The parties settled out of court. Susan Scafidi, *Intellectual Property and Cultural Products*, 81 B.U. L. REV. 793, 828-30 (2001); Daniel Wüger, *Prevention of Misappropriation of Intangible Cultural Heritage Through Intellectual Property Laws*, in POOR PEOPLE'S KNOWLEDGE, *supra* note 27, at 183, 186-87, 199.

that bind others, and its limitation on members' liberty-right and power to grant access.⁶³ 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.⁶⁴

Indeed, here we see interesting analogies to trade secret law. Firms sometimes can prevent employees from revealing economically-valuable secrets to competitors. But firms secure this result either by contract or by keeping their practices secret, or by bringing suit for misappropriation.⁶⁵ If a firm slips and allows a competitor access to its confidential business information, trade secret law no longer protects the firm. The contractual control over disclosure used in commercial settings has no clear analog in tribal contexts—and may be especially problematic if tribal members intermarry and mix with the larger population.⁶⁶ But there is nothing in principle to stop tribes who possess TK from using contract in this manner, subject to domestic contract law. The concept of trade secrecy can apply to indigenous peoples more easily. Again, there is no reason why a group that possesses TK and tries to keep it from falling into the hands of outsiders ought not to receive the same basic legal protection against unwanted disclosure as commercial entities. Admittedly, such an extension is not simple: it would require redefining trade secret to encompass more than just commercially valuable information. Keeping TK secret in this manner, however, is as a practical matter quite difficult, even for TK that might develop in the future. For existing TK, it may be too late—in many cases the secret has already been revealed. So unless one can somehow justify carving out a special set of rules for indigenous groups in the IP system that no other group possesses, desert is too thin a reed to support the robust package of protection described in Part II.

⁶³ See *supra* Part II.B, items (1), (3), and (4).

⁶⁴ See *supra* Part II.B, items (2)(b), (5), (6), and (7)(a)-(b).

⁶⁵ See COHEN & GUTTERMAN, *supra* note 6.

⁶⁶ BROWN, *supra* note 34, at 198-201.

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.⁶⁷ 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.⁶⁸ 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.⁶⁹ 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

⁶⁷ BECKER, PROPERTY RIGHTS, *supra* note 55, at 23.

⁶⁸ *Id.*

⁶⁹ Literature on dispossession includes PAUL KEAL, EUROPEAN CONQUEST AND THE RIGHTS OF INDIGENOUS PEOPLES: THE MORAL BACKWARDNESS OF INTERNATIONAL SOCIETY (2003); HENRY REYNOLDS, DISPOSSESSION: BLACK AUSTRALIANS AND WHITE INVADERS (1996).

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.⁷⁰

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.⁷¹ 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.⁷² Although Shiffrin identifies different understandings of the "intellectual commons," her argument presumes that "initial common ownership applies to intellectual property."⁷³ We question this presumption on the ground that many intellectual commons are open-access resources rather than owned in common.⁷⁴ 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 ap-

⁷⁰ For a detailed examination, see Stephen R. Munzer & Phyllis Chen Simon, *Territory, Plants, and Land-Use Rights among the San of Southern Africa: A Case Study in Regional Biodiversity, Traditional Knowledge, and Intellectual Property*, 17 WM. & MARY BILL OF RTS. J. (forthcoming 2009).

⁷¹ See, e.g., NOZICK, *supra* note 54, at 181-82; James W. Child, *The Moral Foundations of Intangible Property*, 73 MONIST 578 (1990). Labor dominates Locke's own discussion of property, but his examples of picking up acorns and gathering apples, which involve precious little labor, suggest that something hinges on firstness. "And 'tis plain, if the first gathering made them not his, nothing else could." LOCKE, *supra* note 55, § 28. In the present era, Richard A. Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221, 1238-43 (1979), offers a qualified defense of first possession. JEREMY WALDRON, *THE RIGHT TO PRIVATE PROPERTY* 173, 176, 284-87, 386-89 (1988), offers an incisive treatment of first occupancy in Locke and other thinkers. One can also see considerations of firstness, such as the inherent suitability of inventive TK for patent protection, in such non-theoretical works as Antony Taubman & Matthias Leistner, *Traditional Knowledge, in INDIGENOUS HERITAGE*, *supra* note 13, at 59, 95-96. Taubman and Leistner are well aware of the existing legal impediments to obtaining patents on inventive TK. *Id.* at 97-103.

⁷² Seana Valentine Shiffrin, *Lockean Arguments for Private Intellectual Property*, in NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 138 (Stephen R. Munzer ed., 2007).

⁷³ See *id.* at 158-66. For a different criticism of Shiffrin's article, see Jonathan Peterson, *Lockean Property and Literary Works*, 14 LEGAL THEORY 257 (2008).

⁷⁴ Under open access, anyone can come in and take out units of the resource, but no person or set of persons may sell or manage the resource. Under common property, the members of the group individually have rights of entry and withdrawal and collectively have rights to manage or sell the resource and to exclude nonmembers. THRAINN EGGERTSSON, *ECONOMIC BEHAVIOR AND INSTITUTIONS: PRINCIPLES OF NEOINSTITUTIONAL ECONOMICS* 73-74 (1990).

pears 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 jus-

tification). 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.⁷⁵ 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.⁷⁶ 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 en-

⁷⁵ We have little enthusiasm for ever-longer terms for copyright precisely because we view them as unjustified by the public interest in a vibrant public domain. Cf. *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (upholding Congress's extension of the copyright term); William M. Landes & Richard A. Posner, *Indefinitely Renewable Copyright*, 70 U. CHI. L. REV. 471, 471-518 (2003) (proposing a system of indefinitely renewable copyright). Civil law systems operate somewhat differently. See *supra* note 22 and *infra* text accompanying notes 88-102.

⁷⁶ Carpenter, Katyal & Riley, *supra* note 2. They also call it a stewardship "model" and "paradigm."

trusted to him."⁷⁷ 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.

⁷⁷ WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE UNABRIDGED 2240 (2002) (s.v. "steward," sense 1).

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 Hume⁷⁸ and Bentham.⁷⁹ These arguments need not be uniquely utilitarian, as the writings of Aristotle⁸⁰ and Hegel⁸¹ 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."⁸² 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."⁸³ 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."⁸⁴ 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

⁷⁸ DAVID HUME, A TREATISE OF HUMAN NATURE bk. III, pt. 2, §§ 2-4, at 484-516 (L.A. Selby-Bigge ed., 1st ed. 1960) (1888).

⁷⁹ JEREMY BENTHAM, A THEORY OF LEGISLATION 109-23, 148-98 (C.K. Ogden ed., 1931).

⁸⁰ ARISTOTLE, POLITICS bk. II, ch. 5, at 1262^a38-1264^b25, in 2 THE COMPLETE WORKS OF ARISTOTLE 2004-06 (Jonathan Barnes ed., 1984) ("Property should be in a certain sense common, but, as a general rule private; for, when everyone has a distinct interest, men will not complain of one another, and they will make more progress, because everyone will be attending to his own business."). *Id.* at 1263^a25-29, at 2004. MUNZER, *supra* note 18, at 127-28, interprets Aristotle as suggesting the importance of smooth social and economic functioning.

⁸¹ G.W.F. HEGEL, PHILOSOPHY OF RIGHT §§ 41-71, at 40-71 (T.M. Knox trans., 1952), provides a theory of property that requires human agency, which in turn requires stability. Without stable possession and use, it is difficult for an agent to achieve enduring ends. With stability comes security of expectations. For this interpretation, see MUNZER, *supra* note 18, at 79-80.

⁸² WIPO *Composite Study*, *supra* note 50, at 12, 14-16 (emphasis omitted).

⁸³ *Id.* at 14.

⁸⁴ *Id.*

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 "transform[ed] . . . into capital" and thus used as "collateral security for giving traditional communities facilitated access to credit."⁸⁵ 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.⁸⁶ 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.⁸⁷

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 *Urheberpersönlichkeitsrecht* (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).⁸⁸ Only some of these different "rights" are Hohfeldian claim-rights. Others are

⁸⁵ *Id.* at 15.

⁸⁶ Two justifications—improving the lives of TK holders and communities, and benefiting national economies—offered in GRAHAM DUTFIELD, PROTECTING TRADITIONAL KNOWLEDGE: PATHWAYS TO THE FUTURE 3-5 (Int'l Centre for Trade & Sustainable Development, Geneva, 2006) (Issue Paper No. 16), are loosely related to the stability argument. Dutfield is an unusually knowledgeable and acute defender of TK rights, but the nature of his paper does not allow him adequate space in which to supply the needed empirical data. It is important, in particular, to grapple with the costs and benefits of a society that does not recognize IP rights in TK.

⁸⁷ We do not discuss here the anti-commodification argument sketched in the study, *id.* at 12-13, because it has nothing to do with stability. The argument pertaining to international trade relations, *id.* at 15, relates not to stability but to unfair advantage. We consider it under the heading of unjust enrichment and misappropriation. See *infra* text accompanying notes 105-116.

⁸⁸ For a recent exposition that carefully separates these rights, see ELIZABETH ADENEY, THE MORAL RIGHTS OF AUTHORS AND PERFORMERS: AN INTERNATIONAL AND COMPARATIVE ANALYSIS 43-68 (2006).

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.⁸⁹ 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.⁹⁰ 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.⁹¹ 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 *Urheberhre* ("authorial honor") over the earlier *Urheberpersönlichkeitsrecht*, and the relevant body of law was now *Urheberrecht* ("authorial right" or moral right).⁹² French scholarship and law, meanwhile, hewed more closely to individualistic understandings of moral right(s).⁹³ Contemporary French and German laws on moral right(s) differ from each other

⁸⁹ As to the latter, see *id.* at 43-68, 163-276; 1 & 2 STIG STRÖMHOLM, LE DROIT MORAL DE L'AUTEUR (P.A. Norstedt & Söner Förlag, 1966-67, 1973).

⁹⁰ For a brief account, see ADENEY, *supra* note 88, at 9-41. For details, see LUDWIG GIESEKE, VOM PRIVILEG ZUM URHEBERRECHT: DIE ENTWICKLUNG DES URHEBERRECHTS IN DEUTSCHLAND BIS 1845 (Göttingen, Verlag Otto Schwartz & Co. 1995).

⁹¹ ADENEY, *supra* note 88, at 69-86 (describing these changes).

⁹² See *id.* at 70-71, 77-84 (placing these developments in context).

⁹³ See *id.* at 73-77, 85-86 (describing the French/German divide and the effects of the doctrinal shifts).

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 1979.⁹⁴ 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.⁹⁵ 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.⁹⁶ 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

⁹⁴ The U.S. reception of the Berne Convention for the Protection of Literary and Artist Works, July 24, 1971, 25 U.S.T. 1341, 828 U.N.T.S. 221, is atypical. For many years the United States resisted adhering, in large part because of the moral rights provision of Article 6bis. In 1988 Congress passed the Berne Convention Implementation Act, Pub. L. No. 100-568, 102 Stat. 2853 (1988) (Mar. 1, 1989), without moral rights provisions. The U.S. position was that it "already complied sufficiently with the Berne Convention for adherence to be justified," which the General Director of WIPO endorsed. ADENEY, *supra* note 88, at 461. The United States has, along with other common law nations, incorporated some moral rights by federal and state statutes. See, e.g., *id.* at 279-618 (Australia, Canada, United States, and United Kingdom); Cyrill P. Rigamonti, *Deconstructing Moral Rights*, 47 HARV. INT'L L.J. 353 (2006) (noting also Ireland and New Zealand).

⁹⁵ See Robert N. Clinton, *The Rights of Indigenous Peoples as Collective Group Rights*, 32 ARIZ. L. REV. 739 (1990).

⁹⁶ See, e.g., JAMES BOYLE, SHAMANS, SOFTWARE, AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY 21-24, 97-107 (1996); Stephen R. Munzer, *Human Dignity and Property Rights in Body Parts*, in PROPERTY PROBLEMS: FROM GENES TO PENSION FUNDS 25 (J.W. Harris ed., 1998). For the legal aspects of biodiversity and genetic resources, see Antony Taubman, *Genetic Resources*, in INDIGENOUS HERITAGE, *supra* note 13, at 181-291.

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.⁹⁷

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.⁹⁸ 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.⁹⁹ 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

⁹⁷ See Carpenter, Katyal & Riley, *supra* note 2 (approaching these issues by adapting the concept of "personhood"); see also Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982) (developing a concept of "personhood"). Carpenter, Katyal, and Riley wish to avoid stereotypical conceptions of the peoplehood of different groups. It's not clear how they will specify the conditions for determining whether a particular item of TK, such as a drawing or a plant medicinal remedy, reflects the peoplehood of a particular indigenous group.

⁹⁸ Rebecca Tsosie, *Reclaiming Native Stories: An Essay on Cultural Appropriation and Cultural Rights*, 34 ARIZ. ST. L.J. 299, 310 (2002).

⁹⁹ See these articles by Jeremy Waldron: *Minority Cultures and the Cosmopolitan Alternative*, 25 U. MICH. J.L. REFORM 751 (1992); *Multiculturalism and Mélange*, in PUBLIC EDUCATION IN A MULTICULTURAL SOCIETY: POLICY, THEORY, CRITIQUE 90 (Robert K. Fullinwider ed., 1996); *Teaching Cosmopolitan Right*, in EDUCATION AND CITIZENSHIP IN LIBERAL-DEMOCRATIC SOCIETIES: TEACHING FOR COSMOPOLITAN VALUES AND CULTURAL IDENTITIES 23 (Kevin McDonough & Walter Feinberg eds., 2003). Waldron speaks of "cosmopolitanism." Because that word has different meanings in the philosophical literature, we avoid using it here.

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)."¹⁰⁰ 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."¹⁰¹ 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

¹⁰⁰ Jeremy Waldron, *Settlement, Return, and the Supersession Thesis*, 5 THEORETICAL INQUIRIES L. 237, 239 (2004). See also Jeremy Waldron, *Indigeneity? First Peoples and Last Occupancy*, 1 N. Z. J. PUB. & INT'L L. 55 (2003).

¹⁰¹ Kwame Anthony Appiah, *The Case for Contamination*, N.Y. TIMES MAGAZINE (Jan. 1, 2006). He observes that "trying to find some primordially authentic culture can be like peeling an onion . . . cultures are made of continuities and changes." *Id.*

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 (*divulgence*): 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.¹⁰² 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.¹⁰³ 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

¹⁰² As a practical matter and all else being equal, any claim-right or power regarding attribution would work best if an indigenous people has a traditional name or designation for its TK. Having such a name or designation would facilitate legal arguments pertaining to trademarks and geographic indications. For legal details, consult Annette Kur & Roland Knack, *Protection of Traditional Names and Designations*, in INDIGENOUS HERITAGE, *supra* note 13, at 293-337.

¹⁰³ See *supra* Part II.B, items (2)(a)-(b), (3), (5), (6), & (7).

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.¹⁰⁴ 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.¹⁰⁵

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.¹⁰⁶ 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."¹⁰⁷ If all else is equal, "foreign IP owners will be [at a] disadvantage vis-à-vis their local imitators."¹⁰⁸ The absence of IP protection for TK, then, is tantamount "to non-tariff barriers to trade."¹⁰⁹

This argument, which sounds in a quasi-utilitarian under-

¹⁰⁴ This incentive argument is a riff on the so-called "prospect theory" of patents advanced in Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977). See also ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 253-56 (4th ed. 2007) (discussing the subsequent literature and the economic concepts).

¹⁰⁵ For the details, see, e.g., RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT (Tentative Draft No. 1, 2001); HANOCH DAGAN, *THE LAW AND ETHICS OF RESTITUTION* (2004).

¹⁰⁶ WIPO *Composite Study*, *supra* note 50, at 15.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

standing 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 restitutionary 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.¹¹⁰ 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.¹¹¹

¹¹⁰ See Munzer & Simon, *supra* note 70.

¹¹¹ We have been surprised by the objection that other groups do enjoy such protection. The objector cited *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257 (1979). However, *Aronson* holds that federal law does not preclude state contract law that would enforce payment of reduced royalties on a pending patent that was subsequently rejected. *Aronson* is not on point because the Court ruled against the petitioner on contract grounds, not as a matter of IP law.

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.¹¹² Basically, the treaty facilitates farmer and community access to information and improved plant technology through a standard Material Transfer Agreement.¹¹³ However, the Seed Treaty applies to only sixty-four important food and forage crops.¹¹⁴ 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 café that inspired someone to open a similar café 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. Consider

¹¹² See FAO Seed Treaty, *supra* note 51, at arts. 13.2(d), 13.3, 13.6. For reservations pertaining to the common fund, see *infra* text accompanying note 205-06.

¹¹³ *Id.* at arts. 13.1-13.2. The text of the Standard Material Transfer Agreement is available at [ftp://ftp.fao.org/ag/agp/planttreaty/agreements/smta/SMTAe.pdf](http://ftp.fao.org/ag/agp/planttreaty/agreements/smta/SMTAe.pdf).

¹¹⁴ The covered crops are listed in Annex I to the FAO Seed Treaty, *supra* note 51.

the implications were Starbucks required to pay Italians for selling espresso or cappuccino. That such an outcome would cross a common-sense line is evident to at least one of two characters from *The Sopranos* who enter a Starbucks-style coffee shop:

Paulie. The fucking Italian people. How did we miss out on this?

Pussy. What?

Paulie. Fucking espresso, cappuccino. We invented the shit and all these other cocksuckers are getting rich off it.

Pussy. Yeah, isn't it amazing?

Paulie. And it's not just the money. It's a pride thing. All our food, pizza, calzone, buffalo mozzarell', olive oil. These fucks have nothing. They ate "pootsie" before we gave them the gift of our cuisine. But this, this is the worst. This espresso shit.

Pussy. Take it easy.¹¹⁵

To grant Starbucks legally enforceable IP rights in upscale coffee houses would severely constrain competition. To grant Italians legally enforceable IP rights in espresso or cappuccino would certainly constrain future innovations in coffee-making. (Would the caramel frappuccino ever have been invented?) And what about the rights of Italian-Americans, such as the fictional *Sopranos* mobsters? Would they too receive some share in this system? How many generations down would the right to this share extend? What about the original coffee users, who were likely from Africa or the Arabian peninsula?¹¹⁶ The problems with such a system are, we believe, manifold and serious.

Thus, just 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.

9. Infringement and Dilution

Perhaps defenders of TK rights can take a page from trade-

¹¹⁵ *The Sopranos: 46 Long* (HBO television broadcast, Jan. 17, 1999), quoted in Scafidi, *supra* note 62, at 816.

¹¹⁶ ANTONY WILD, *COFFEE: A DARK HISTORY* (2005).

mark law in regard to both infringement and dilution. In trademark infringement there is typically confusion as to goods, their source, or their licensure or approval.¹¹⁷ Trademark dilution does not require confusion and comes in two main forms: blurring and tarnishment. Consider the names "Coca-Cola" and "Coke" and the shape of the glass bottles in which the beverage often comes. Both the names and the shape are trademarks. If a different firm markets its cola as "Coca-Cola," it may create consumer confusion (infringement). If another firm markets "Sugary Cola" in Coke-shaped bottles, it can weaken the secondary meaning of the characteristic curved bottles (blurring). If yet another firm sells whiskey labeled "Coca-Cola Whiskey," it can sully the meaning of the name "Coca-Cola" (tarnishment).¹¹⁸

We do not think that TK holders can borrow these legal concepts and use them straightway to defend their TK. Few examples of TK have generally recognized distinctive marks, emblems, or shapes that carry secondary meaning, though some nations are beginning to extend trademark protection to TK.¹¹⁹ Ethiopia did so with three single-origin heritage coffees: Harar (also spelled "Harrar"), Sigamo, and Yirgacheffe.¹²⁰ This example is interesting, but it suggests that trademark is most applicable to those TK-related products that are widely sold in markets, which is hardly the norm for TK. And because the underlying rationale for trademark is consumer confusion, not the protection of producer interests, trademark infringement requires proof of likelihood of confusion on the part of consumers.

As for trademark dilution, laws relying on this concept often require that the mark be "truly distinctive" or "famous."¹²¹ It will be hard for many TK holders to meet requirements of this kind. Conceptually, dilution rests on the idea that the mark is well

¹¹⁷ Preventing consumer confusion is also a rationale for GIs. See Raustiala & Munzer, *supra* note 9, at 361-63, 365 (assessing arguments pertaining to consumer confusion in the case of GIs).

¹¹⁸ Trademark law was originally rooted in common law but now is mainly a matter of statutes and regional and international agreements. See, e.g., RESTATEMENT (THIRD) OF UNFAIR COMPETITION ch. 3 (1995); J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION (4th ed. 2009); DAVID S. WELKOWITZ, TRADEMARK DILUTION: FEDERAL, STATE, AND INTERNATIONAL LAW (2002).

¹¹⁹ Ways of possibly extending trademark to TK are discussed further in Susy Frankel, *Trademarks and Traditional Knowledge and Cultural Property Rights*, in TRADEMARK LAW AND THEORY, *supra* note 46, at 433-63; Coenraad Visser, *Culture, Traditional Knowledge and Trademarks: A View from the South*, in TRADEMARK LAW AND THEORY, *supra* note 46, at 464-78. For trademark, and trademark-like, protection of TK, see *infra* text accompanying notes 166-82.

¹²⁰ See Mary O'Kicki, *Lessons Learned from Ethiopia's Trademarking and Licensing Initiative: Is the European Union's Position on Geographical Indications Really Beneficial for Developing Nations?*, 6 LOY. CHI. INT'L L.J. (forthcoming 2009).

¹²¹ See, e.g., 15 U.S.C. § 1125(c)(1) (2006) ("famous and distinctive"); WELKOWITZ, TRADEMARK DILUTION, *supra* note 118, at chs. 2, 4-5.

known—that is, it possesses what is commonly called secondary meaning or acquired distinctiveness that is capable of being “diluted.” The dilution that occurs must be in the eyes of the *public*, not the mark holder.

In other words, even if a tribe felt that its sacred traditional music had been appropriated by an outsider and used for a profane or mundane purpose—and was thereby tarnished in some fashion—that argument would only fit the underlying basis for trademark dilution if the original sacred music overcame two serious hurdles. First, it would have to be trademarked and widely known beyond the mark holders (here, the tribe). Second, those outside the tribe would have to perceive tarnishment (or blurring) stemming from the hypothesized appropriation.¹²² Only rarely are public perceptions likely to be well-formed with regard to folklore. In the general run of cases, it is only tribal members and perhaps a few Western cognoscenti, not the general public, who will have the relevant perceptions. As a conceptual and practical matter, trademark dilution applies poorly to most TK, which is more akin to patent, copyright, or trade secret.

V. JUSTIFIABLE INTELLECTUAL PROPERTY RIGHTS IN TRADITIONAL KNOWLEDGE

In Part IV, we examined a wide range of theories of property. The arguments from desert, firstness, and incentives to innovate do little, jointly or severally, to justify the legal protection of TK. The arguments from incentives to commercialize, from unjust enrichment, misappropriation and restitution, and perhaps from the moral right of the community, have a bit more force. Trademark infringement and dilution fit poorly. As a result, we find only mild support for TK protection in existing theories of property. Clearly TK ought to invalidate patents that are based on it. And trade secret ought to protect indigenous groups that possess TK much as it does for firms that possess valuable business-related knowledge. Beyond these areas, the content of the rights package is less clear. But we are certain that content is no more than modest.

In Part V we seek to spell out that content in some detail. We do so in regard to patent, copyright, trademark, *sui generis* rights, and remedies. The core of our message is: Defensive protection is justifiable; offensive protection secured through the adept use of

¹²² For U.S. law on the matter, see Trademark Dilution Revision Act of 2006, 15 U.S.C.A. § 1125 (West 2009); 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION §§ 24:89, 24:116 (4th ed. 2009) (likelihood of association by the public is required for both blurring and tarnishment).

existing categories of IP is largely justifiable; but other efforts to obtain IP protection for TK cannot usually be justified by property arguments.

A. Defensive Protection: Against and by Patents

The various arguments that survive our examination, or at least survive it to some extent, support the defensive protection of TK. Here the phrase “defensive protection” applies to assorted ways of preventing outsiders from using TK without the informed consent of the relevant indigenous people.¹²³ In what follows, we separate permissible from impermissible ways. We also pay careful attention to the justifiable duration of protection. Two WIPO documents are immensely helpful in detailing how to protect TK from unauthorized use by outsiders: one explores practical mechanisms,¹²⁴ and the other updates and condenses many of these mechanisms.¹²⁵ Both concentrate on preventing TK from being patented by outsiders. Neither attends to the protection of TK, especially folklore, by copyright or *sui generis* IP rights.¹²⁶

Because of the centrality of disclosure to patent law, defensive protection that depends on patent law is a two-edged sword. Suppose that an indigenous group submits information to the TKDL¹²⁷ describing the group’s use of the bark from a certain tree to alleviate rheumatoid arthritis. The description is translated from an indigenous language, arranged according to the International Patent Classification, and published in the TKDL. On the one hand, the indigenous group’s TK thus published easily qualifies as prior art.¹²⁸ Thus no outsiders ought to get a patent on the use of the bark for rheumatoid arthritis. On the other hand, outsiders now have access to the TKDL and can learn about the medicinal use of the tree bark. Suppose that they isolate the active com-

¹²³ This characterization is close to that of WIPO *Practical Mechanisms*, *supra* note 50, at 1 (“The term ‘defensive protection’, when applied to traditional knowledge and genetic resources, refers to measures aimed at preventing the acquisition of intellectual property rights over traditional knowledge (TK) or genetic resources by parties other than the customary custodians of the knowledge or resources.”).

We offer three clarifications. First, the quoted sentence in effect defines TK as not including genetic resources or folklore. For us, TK includes them. Second, the quotation does not explicitly extend “defensive protection” to the protection of folklore. We do. See *infra* text accompanying notes 158, 175-77, 189-200. Third, the “customary custodians” are indigenous peoples. We do not use this expression to coincide with “stewards” as employed in the stewardship theory of Carpenter, Katyal & Riley, *supra* note 2, which we criticize *supra* in Part IV.B.3.

¹²⁴ WIPO *Practical Mechanisms*, *supra* note 50.

¹²⁵ WIPO *Defensive Protection Measures*, *supra* note 50.

¹²⁶ See, e.g., Agnès Lucas-Schloetter, *Folklore*, in *INDIGENOUS HERITAGE*, *supra* note 13, at 339-505. We take up copyright for folklore later in this Article. See *infra* Part V.B.1.

¹²⁷ On the TKDL, see *supra* text accompanying note 37 and *infra* note 208.

¹²⁸ Regulations Under the Patent Cooperation Treaty, rule 33.1, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231.

pound and then discover that it cannot be used on a recurrent basis because of liver toxicity. They then use hints from the toxic compound to create a new drug not found in nature that relieves rheumatoid arthritis better than other products on the market and has fewer side effects than all of them. If the new drug is novel, useful, nonobvious, and appropriately described and enabled, it will be patentable. The indigenous group's TK is still prior art with respect to some actual or possible inventions, but it is not prior art *that anticipates the new drug*.¹²⁹ By publishing in the TKDL, the indigenous group has seen its tree-bark TK become financially worthless—perhaps decades earlier than it would have had the information never been published.¹³⁰

Moreover, defensive protection is hardly a replacement for formally recognized positive rights in TK—especially by patent. Patents may earn royalties. Defensive protection doesn't. It also doesn't, in itself, exclude others from coming up with the same knowledge independently and then using it.¹³¹ Patents do. If, however, an indigenous group can meet patent requirements, it could obtain a patent for purely defensive purposes in case it has no interest in obtaining any financial benefits from the patented TK.¹³²

The defensive use of protective measures has two aspects. One aspect is legal: to make sure that TK information is published so as to count as prior art. The other aspect is practical: to make sure that an indigenous group's TK is likely to be found in a search for prior art.¹³³

On the legal side, TK advocates can seek to reform patent law to accommodate better the role of TK. For instance, a new IPC category, A61K 36/00, was recently created for TK.¹³⁴ TK advocates can also ascertain the criteria for prior art and make sure that they are met. This possibility involves looking at international and domestic law. For example, the *Patent Cooperation Treaty Regulations* provide that

¹²⁹ See 35 U.S.C. § 103 (2006) (stating the nonobviousness requirement); ROGER E. SCHECHTER & JOHN R. THOMAS, *PRINCIPLES OF PATENT LAW* 142-81 (2d ed. 2004) (discussing prior art and nonobviousness).

¹³⁰ Cf. WIPO *Practical Mechanisms*, *supra* note 50, at 2.

In some scenarios, defensive protection may actually undermine the interests of TK holders, particularly when this involves giving the public access to TK which is otherwise undisclosed, secret or inaccessible. In the absence of positive rights, public disclosure of TK may actually facilitate the unauthorized use of TK which the community wishes to protect.

¹³¹ See *id.* (explaining why defensive protection "is no substitute for positive protection").

¹³² 35 U.S.C. § 157 (2006) allows defensive patents under its Statutory Invention Registration system.

¹³³ See WIPO *Practical Mechanisms*, *supra* note 50, at 3 (distinguishing these two aspects of defensive strategies).

¹³⁴ *Id.* at 19.

relevant prior art shall consist of everything which has been made available to the public anywhere in the world by means of written disclosure (including drawings and other illustrations) and which is capable of being of assistance in determining that the claimed invention is or is not new and that it does or does not involve an inventive step (i.e., that it is or is not obvious), provided that the making available to the public occurred prior to the international filing date.¹³⁵

Regional treaties and agreements also affect the rules pertaining to prior art. As to domestic law, scrutinizing newly issued patents to see whether they make use of TK¹³⁶ and advising representatives of indigenous groups in regard to prior informed consent¹³⁷ are important. All of these legal steps are defensive measures supported by the argument from unjust enrichment and restitution¹³⁸ and, to a lesser and uncertain extent, by the argument based on the moral right of the community.¹³⁹

Indigenous peoples also have many practical measures they can take to ensure that relevant TK is easily accessible by patent examiners, search authorities, and would-be patent applicants.¹⁴⁰ For example, they can place information about their TK in publications such as *Research Disclosure* and *IP.com Journal*, and websites such as IP.com.¹⁴¹ This strategy is somewhat akin to, and as equally justifiable as, the decision by some corporations to place details of their inventions in their own online electronic databases as well as their in-house print publications, which they distribute to patent offices.¹⁴² Plant-related TK involving germplasm can be published on the internet using the System-Wide Information Network on Genetic Resources (SINGER).¹⁴³ It and other depositories are supported by such organizations as the Consultative Group on International Agricultural Research (CGIAR).¹⁴⁴ Patent examiners can access SINGER when searching for prior art and deny patents that depend on "germplasm held by CGIAR."¹⁴⁵ This preventive effect can result even when the germplasm does not meet "the novelty and inventive step [nonobviousness] requirements."¹⁴⁶ It

¹³⁵ Regulations Under the Patent Cooperation Treaty, *supra* note 128, at Rule 33.1.

¹³⁶ WIPO *Practical Mechanisms*, *supra* note 50, at 3.

¹³⁷ *Id.* at 10.

¹³⁸ See *supra* text accompanying notes 105-116.

¹³⁹ See *supra* text accompanying notes 88-102.

¹⁴⁰ See WIPO *Practical Mechanisms*, *supra* note 50, at 3.

¹⁴¹ See *id.* at 4 (explaining this strategy).

¹⁴² Examples of the latter include the *Bell Laboratory Record*, the *IBM Technical Disclosure Bulletin*, the *Siemens Zeitschrift*, and the *Xerox Disclosure Journal*. *Id.* For further details, see *id.*

¹⁴³ See *id.* at 8-9 (describing the operation of SINGER).

¹⁴⁴ *Id.* at 5-9.

¹⁴⁵ "WIPO and the CGIAR have hyperlinked the SINGER to the WIPO Online Portal of Databases and Registries Concerning TK and Genetic Resources." *Id.* at 9.

¹⁴⁶ *Id.*

can be a lot less expensive to prevent an unwarranted patent from being issued than it is to have it revoked or to seek other remedies once the patent is issued.

The foregoing measures all center on TK disclosure, and we have already seen that disclosure is a double-edged sword. It carries the risk of unwittingly tipping off outsiders to knowledge that will ultimately aid them.¹⁴⁷ Accordingly, TK holders need to manage the downside risks of disclosure. One way to do so is to use disclosure sparingly.¹⁴⁸ A second, related way is to opt for positive protection by filing a patent application. A third way is to limit disclosure to selected parties. To some it will be distressing that TK holders need to be so careful in deciding how to manage their TK. Yet someone who owns secret business information must take similar steps to protect it as a trade secret. To others it will appear regrettable that full access to TK might be limited. Still, the argument from unjust enrichment and misappropriation and, to a smaller and more debatable extent, the argument from the moral right of the community justify these practical defensive measures.

So far we have departed little from positions previously espoused by others, such as in recent WIPO documents. We do differ, however, from those who argue that defensive measures ought to protect TK forever. Undisclosed TK is still vulnerable to independent discovery and invention. Disclosed TK does not merit perpetual protection. Suppose that an item of TK is disclosed on a certain date. That item is established as prior art as of that date. But it might not remain prior art eternally, for it can sometimes be lost. Here the doctrine of lost art might be relevant.¹⁴⁹ In any case, the importance of a vibrant public domain remains as do the justified temporal limitations on virtually all IP rights. If TK holders prefer to seek indefinite protection, they can opt for trade secret protection.

B. Offensive and Defensive Protection: Copyright and Trademark

WIPO documents often separate TK from both folklore and genetic resources.¹⁵⁰ For example, one WIPO document speaks of "traditional cultural expressions" and "expressions of folklore."¹⁵¹

¹⁴⁷ See *supra* text accompanying notes 127-30.

¹⁴⁸ See WIPO *Practical Mechanisms*, *supra* note 50, at 10, 20.

¹⁴⁹ 35 U.S.C. § 102(g) (2006); Mark L. Rohrbaugh, *The Patenting of Extinct Organisms: Revival of Lost Arts*, 25 AIPLA Q.J. 371, 397-407 (1997) (arguing that extinct organisms, which might once have been biodiversity TK, could be independently regenerated and patented by scientists today); *supra* text accompanying note 45.

¹⁵⁰ See WIPO documents cited *supra* in note 50.

¹⁵¹ See WIPO *Folklore*, *supra* note 50, at 1. This document is identical to prior drafts prepared for earlier sessions. See *id.* at 2.

though it uses these two terms interchangeably.¹⁵² We simplify and just use the word "folklore." This subsection treats folklore separately chiefly because folklore raises issues of copyright and trademark rather than patent.

1. Copyright

TK holders can use copyright law offensively to protect many items of folklore. The standard rules of copyright are justified by many of the arguments we have surveyed: desert based on labor, firstness, stability, incentives to innovate, incentives to commercialize, and, perhaps, the moral right of the author. However, one cannot transfer these typical copyright provisions without further ado to folklore. Fixation in a tangible medium of expression is sometimes wanting in the case of folklore. Additionally, as we have shown, arguments from desert based on labor and firstness apply unevenly to group works.¹⁵³ Moreover, for groups the moral right of the author has to become an argument from the moral right of the community, and we have pointed out the difficulties with and limitations of the transmutation.¹⁵⁴ In the case of folklore that an indigenous group regards as sacred and has no desire to bring to market, the argument based on an incentive to commercialize is inapplicable.¹⁵⁵

Nevertheless, there are many items of folklore from which TK holders may be eager to obtain financial returns, and here, copyright law provides a means of offensive protection. The main steps are fixation and registration in those countries which require it.¹⁵⁶ Ordinary copyright, though, does not have unlimited duration. We see no compelling reason to vary this rule based on the type of work or the particular author(s).¹⁵⁷ We therefore disagree with nations such as Ghana that have tried to achieve indefinite life for copyrights on folklore. The Ghanaian Copyright Act 2005 protects "expression[s] of folklore" by "rights of folklore . . . vested in the President for the people of the Republic."¹⁵⁸ These rights

¹⁵² *Id.* at 7 ("The specific choice of terms would be determined at the national and regional levels (see draft Article 1).").

¹⁵³ See *supra* Parts IV.B.1 and IV.B.2.

¹⁵⁴ See *supra* Part IV.B.5.

¹⁵⁵ See *supra* text accompanying note 104.

¹⁵⁶ In rare cases they may be able to get a common-law copyright or a copyright under a state statute without fixation. The federal Copyright Act of the United States, for example, creates a tiny window for unfixed copyrights under state law. 17 U.S.C. § 301(b) (2006). But see *Estate of Hemingway v. Random House, Inc.*, 244 N.E.2d 250 (N.Y. 1968) (holding that the estate was not entitled to a state-law copyright in unfixed conversations later quoted in print because Ernest Hemingway had not explicitly retained his rights to the conversations nor had he himself attempted to obtain a copyright).

¹⁵⁷ See *supra* text accompanying notes 64, 71, 96, 101-102.

¹⁵⁸ Copyright Law, P.N.D.C.L. No. 690, § 4 (May 17, 2005) (Ghana), available at http://www.wipo.int/clea/en/text_pdf.jsp?lang=EN&id=1789.

exist "in perpetuity" "on behalf of and in trust for the people of the Republic."¹⁵⁹ Nonetheless, we commit ourselves to no specific term for copyright protection for folklore, though we are skeptical of long copyright terms in general.¹⁶⁰ In the case of folklore copyrights, terms relating to the life of the "author" are out of place. To regard an indigenous group as a corporate author unbound by a publication date would effectively resurrect the idea of perpetual copyright for folklore.

Copyright also has defensive uses. Defensive protection would halt the use, and misuse, of folkloric TK by outsiders. For instance, if an indigenous group has copyrighted sculptures that belong to its artistic tradition, it can seek an injunction, damages, and perhaps even criminal penalties against anyone else who infringes its copyright.¹⁶¹ This example shows that owning a copyright can also be used defensively to prevent misappropriation. Even if an indigenous group lacks a copyright on its folklore, it can sometimes successfully challenge the efforts of others to copyright its folklore. Suppose that an indigenous group has architectural drawings of its temples. Others cannot copyright these drawings, because they were not the authors of them.¹⁶²

Copyright-based rights have major limitations, however. They are temporally limited and, in most countries, subject to some sort of fair-use doctrine.¹⁶³ Just as the copyright owner of Roy Orbison's "Oh Pretty Woman" had to endure a rap parody of the song by Two Live Crew,¹⁶⁴ so an indigenous group might have to put up with a parody of its leading saga. The justifications for copyright are not enough to support a power to create binding copyright rules on others relating to access to its folklore, a power to exempt folkloric works from copyright's fixation requirement, or a power to prevent others from copyrighting or using their folkloric works except as described above.¹⁶⁵

2. Trademark

Because much TK, especially folkloric TK, does not have names or symbols with secondary meaning, trademark is not the most plausible way to protect it offensively. We find an exception

¹⁵⁹ *Id.* § 17. Accord Lucas-Schloetter, *supra* note 126, at 377 (interpreting section 17 to maintain that these folklore rights "exist in perpetuity").

¹⁶⁰ See *supra* note 75.

¹⁶¹ For U.S. law, see, e.g., 17 U.S.C. §§ 502(a), 504, 506(a) (2006).

¹⁶² Under standard copyright rules outsiders could, of course, make their own drawings of the temples, and these would fall under the drafter's copyright.

¹⁶³ In the United States, this doctrine sounds in the Copyright Act, 17 U.S.C. § 107 (2006).

¹⁶⁴ *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569 (1994). The Court's decision did not, though, give a completely free rein to parodies.

¹⁶⁵ See *supra* Part II.B, items (3), (7)(a), and (7)(b).

in the case of Ethiopian heritage coffees.¹⁶⁶ But there, the TK was not folklore as understood in this Article. All the same, it is certainly possible for indigenous groups to register names or symbols as trademarks for folklore. The arguments from unjust enrichment and misappropriation and from infringement and dilution help to justify such trademarks. Beyond that, arguments based on ensuring fair competition and preventing consumer confusion are standard and sound justifications for trademarks of indefinite duration, provided that the mark is used and safeguarded continually.

Can indigenous peoples justifiably secure offensive protection for some marks that do not satisfy the usual conditions for trademarks? One path is through certification or collective marks. The former indicates that a particular product meets certain criteria—for example, the letters "UL" signify that the product meets the safety requirements of Underwriters Laboratories.¹⁶⁷ The latter indicates that the maker of a product or the provider of a service belongs to an association that uses the mark to promote the quality of its members' wares and services. The arguments from desert based on labor, stability, incentives to commercialize, and, to a hazier and more controversial extent, the moral right of the community help to justify certification marks, collective marks, and related marks for the offensive protection of folkloric TK.

Indigenous peoples are already using marks of various sorts to protect their folklore. For instance, the Seri people of Mexico registered the trademark "Arte Seri" with the Mexican National Institute of Industrial Property.¹⁶⁸ This trademark applies to five classes of products, each of which amounts to folklore.¹⁶⁹ Issues remain regarding the effective use of this trademark by the Seri.¹⁷⁰ As to certification marks, which are also sometimes called authentication marks, Australian law protects the folklore of Tiwi artists by an "authenticity label."¹⁷¹ Likewise, the work of Maori artists in New Zealand is protected by the marks "Toi Iho" and "Maori made."¹⁷² In the United States, the Indian Arts and Crafts Act is

¹⁶⁶ See *supra* text accompanying note 120.

¹⁶⁷ For information on Underwriters Laboratories, see its website at <http://www.ul.com> (last visited Nov. 24, 2008). Under U.S. law, the legal basis is 15 U.S.C. § 1127 (2006) (known more familiarly as § 45 of the Lanham Act), which also permits collective marks. See generally 3 MCCARTHY ON TRADEMARKS, *supra* note 122, § 19.32[1].

¹⁶⁸ WIPO *Existing Protection Report*, *supra* note 50, Annex II, at 2.

¹⁶⁹ Necklaces, sculpted rock, ironwood and elephant wood carvings, clay carvings, and rag dolls. *Id.*, Annex II, at 3.

¹⁷⁰ See *id.*, Annex II, at 2-4 (identifying omissions, inconstant use, the administrative costs of registration, and ownership status as problems).

¹⁷¹ See *supra* note 47.

¹⁷² Under New Zealand law, these are trademarks that also function as marks of authenticity. See Trade Marks Act 2002, 2002 S.N.Z. No. 49 (N.Z.), available at <http://www.legislation.govt.nz/act/public/2002/0049/latest/whole.html>; Parese Sud-

similar.¹⁷³

TK holders can also engage in the defensive protection of indigenous names and symbols if trademarked, or even merely used, by outsiders.¹⁷⁴ When deployed to prevent consumer confusion, defensive protection is easily justified. Thus the Australian Trade Practices Act 1974 justifiably prohibits misrepresentation by outsiders that their crafts, designs, and other folkloric works are made by Aborigines.¹⁷⁵ A harder question is whether it is justifiable for a legislature to forbid outsiders from writing books under indigenous-sounding pseudonyms—as Colin Johnson did by writing books under the pen name “Mudrooroo Nyoongar.”¹⁷⁶ If there is no risk of consumer confusion, the case is much closer. To illustrate, the Kimberley Aboriginal People use Wandjina spirit images in connection with their creation myth. A surfboard company that was not indigenously owned employed some of the images as a logo to market its goods.¹⁷⁷ If there was little risk that prospective buyers would believe that Kimberley Aborigines had made the surfboards, one has to look elsewhere to justify preventing the company from marketing its surfboards with the logo.

One place to look is under the rock of cultural insensitivity, for TK advocates often point to the spiritual dimensions of such cases. As to Wandjina spirit images, for example, one report states that the “Kimberley aborigines believe that inappropriate treatment of these images will cause death and devastation.”¹⁷⁸ Many people in the United States are aware of similar issues relating to outsiders’ use of Indian mascots and logos, such as Chief Illiniwek, the former mascot of the University of Illinois,¹⁷⁹ and Chief Wahoo, the logo of the Cleveland Indians baseball team.¹⁸⁰ Although

dith, Recent Developments in Indigenous IP in New Zealand, 13th Biennial Copyright Law and Practice Symposium, New Zealand Ministry of Economic Development (Nov. 22-23, 2007), available at <http://www.copyright.org.au/training/conferences/past-conferences/symposium2005/powerpoint/suddith2007-ppt.pdf>; Caslon Analytics Note, *Indigenous Marks*, <http://caslon.com.au/indigenoumarknote2.htm> (last visited Mar. 23, 2009).

¹⁷³ The Indian Arts and Crafts Act of 1990, Pub. L. No. 101-644, 104 Stat. 4662 (codified as amended at 18 U.S.C. §§ 1158, 1159, 20 U.S.C. §§ 4414-26, & 25 U.S.C. §§ 305-10 (2006)) makes illegal the display or offer for sale of any art or craft product in a manner that falsely suggests it is Indian-produced.

¹⁷⁴ For a fine survey of the international, regional and domestic IP protections available, see Kur & Knack, *supra* note 102, at 296-331.

¹⁷⁵ WIPO Roundtable, *supra* note 50, at 7.

¹⁷⁶ *Id.* at 8.

¹⁷⁷ Kur & Knack, *supra* note 102, at 294; Michael Blakeney, *The Protection of Traditional Knowledge Under Intellectual Property Law*, 22 EUR. INTEL. PROP. REV. 251, 254 (2000).

¹⁷⁸ WIPO Roundtable, *supra* note 50, at 8 (citing AUSTRALIAN DREAMING: 40,000 YEARS OF ABORIGINAL HISTORY 74 (Jennifer Isaacs, ed., Lansdowne Press 1980)).

¹⁷⁹ See *Board Retires Chief Illiniwek*, L.A. TIMES, Mar. 14, 2007, at D4 (reporting that the University of Illinois would retire the mascot after February 21, 2005, in compliance with NCAA policy).

¹⁸⁰ See Wikipedia: File: Cleveland Indians Logo, http://en.wikipedia.org/wiki/Image:Cleveland_Indians_logo.svg (last visited Nov. 26, 2008); Wikipedia, Chief Wahoo, http://en.wikipedia.org/wiki/Chief_Wahoo (last visited

these mascots and logos are often insensitive and offensive, legal bans on such images raise issues of free speech.¹⁸¹ In our judgment, to bestow such defensive IP protection on indigenous peoples’ untrademarked names, images, words, and symbols—without doing the same for non-indigenous groups—also raises the now-familiar problem of justifying special rules for indigenous peoples.

Our worry here is not that Irish people, or Irish Americans, will take offense at the pugnacious leprechaun that is the logo of the “Fightin’ Irish” of the University of Notre Dame—or that they should be afforded the right to do so.¹⁸² We are concerned with the risk that legal restrictions may make public culture less vibrant and outspoken. We venture no opinion on issues of etiquette or prudence in regard to using indigenous images or making parodies of them. But on the issue of legal and political philosophy, legal liberty-rights to make, exhibit, publish, parody, imitate, and otherwise use these images are generally justifiable because of the interest in a vibrant public domain.

C. Offensive and Defensive Protection by *Sui generis* Rights

Sui generis rights, as understood here, satisfy two conditions. First, they are rights that do not fall into any of the classifications discussed earlier. Second, they are IP rights; they are not rights that fail to fall within the domain of property, or property rights that fail to fall within the domain of IP.¹⁸³ However, the only *sui generis* rights germane to our project are those that are, or can be, supported by property arguments. This restriction sometimes makes it difficult to examine some suggested *sui generis* rights. We try to be generous in understanding the nature of the arguments on offer, and if we can sketch property foundations for these rights even though no such foundations have been explicitly suggested, we do so. We do not, then, make the availability of property arguments a defining condition of *sui generis* rights, but our inquiry is limited to those rights undergirded by property arguments.

We find nothing inherently misguided about *sui generis* rights, for there is no reason why all justifiable IP rights should fall into one of the IP pigeonholes mentioned earlier. For instance,

Nov. 29, 2008).

¹⁸¹ See, e.g., Eugene Volokh, *Freedom of Speech, Cyberspace, and Harassment Law*, 2001 STAN. TECH. L. REV. 3, 43 & n.80 (contending that eliminating Indian mascots might raise First Amendment issues).

¹⁸² Gaelic-speaking Irish people suffered from centuries of British oppression, but it does not fit the political realities of the TK movement to view the Irish today as an indigenous people.

¹⁸³ Examples of rights that do not meet this second condition are certain customary, cultural-heritage, and human-rights protections discussed in Lucas-Schloetter, *supra* note 126, at 413-39.

federal law in the United States protects the original designs of boat hulls, which are otherwise not patentable, provided that the owner applies to register the design with the Patent Office and the design is instantiated in an actual boat hull.¹⁸⁴ Likewise, the Semi-Conductor Chip Protection Act of 1984¹⁸⁵ protects original mask works once they are registered with the Copyright Office. We believe that arguments from desert based on labor, firstness, incentives to innovate and to commercialize, and unjust enrichment and misappropriation, taken together, *help* to justify these two *sui generis* rights. We are not wholly convinced that these arguments *suffice* to justify either of these rights, and we do not slavishly accept the arguments for all new *sui generis* rights.¹⁸⁶ Also, even if some protection is warranted by a *sui generis* right—as, for example, with databases—one must guard against making the protection too strong.¹⁸⁷

Precisely because descriptive TK differs in many ways from the underlying subject matter of standard IP rights, it is unsurprising that many seek *sui generis* protection for TK. Equally unsurprising are the wide variations of actual and proposed *sui generis* rights.¹⁸⁸ To avoid superficiality, we concentrate on a prominent—not necessarily typical—Peruvian *sui generis* right that recapitulates some features of the *domaine public payant*. We show that, in light of our earlier arguments, this right is justifiable only in part.

Domaine public payant, literally “public domain paying,” is sometimes rendered as the “right of the community of authors.”¹⁸⁹ Usually it applies to circumstances in which standard IP protection has expired and the work has entered the public domain in one respect, and yet some royalty must still be paid by users of the work

¹⁸⁴ Vessel Hull Design Protection Act, 17 U.S.C. §§ 1301-32 (2006).

¹⁸⁵ 17 U.S.C. §§ 901-14 (2006).

¹⁸⁶ See, e.g., Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687 (2006) (arguing that stronger IP protection for fashion designs is unnecessary because the fashion industry, counterintuitively, operates within a low-IP equilibrium in which copying does not deter innovation and seems rather to advance it).

¹⁸⁷ In the wake of the *Feist Pub'n, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991) (holding that U.S. copyright law does not protect databases and similar compilations unless they rest on some minimal threshold of creativity), some in Congress have sought a *sui generis* database protection right. Cf. J.H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data?*, 50 VAND. L. REV. 51 (1997) (drawing out the implications of a *sui generis* database regime and arguing for models that would reduce the risk of market failure without creating undue legal barriers to entry). The E.U. Database Directive goes much too far in recognizing a wholly new *sui generis* right in the entire database each time a “substantial change” is made. See *supra* text accompanying note 10.

¹⁸⁸ For an excellent treatment of *sui generis* rights, see Taubman & Leistner, *supra* note 71, at 63, 125, 136-51, 156-71, 177-79. See also Lucas-Schloetter, *supra* note 126, at 411-13, 477-80, 483; Stoll & von Hahn, *supra* note 14, at 7, 36, 38, 40, 47.

¹⁸⁹ Adolf Dietz, *A Modern Concept for the Right of the Community of Authors* (Domaine Public Payant), 24 COPYRIGHT BULL. 13 (1990).

to societies representing authors or inventors generally.¹⁹⁰ This *sui generis* right often follows copyright expiration and has some roots in the moral right of the author; the duration of early forms of *domaine public payant* varied widely.¹⁹¹ As this *sui generis* right began to take on somewhat more definite shape during the second half of the twentieth century,¹⁹² it had to accommodate the digital information revolution¹⁹³ and pressure from scientists concerning access to an asserted biodiversity commons.¹⁹⁴

By the turn of the century the concept of *domaine public payant* was pressed into service to protect TK. A notable example is a Peruvian statute that has elicited extensive commentary.¹⁹⁵ The statute contains a provision for TK that has passed from an indigenous people to the wider public. The statute applies, *inter alia*, to cases in which an item of “collective knowledge” (*un conocimiento colectivo*)—which falls within TK as understood in this Article—“has been made accessible to persons other than the indigenous peoples by mass communication media such as publication or, when the properties, uses or characteristics of a biological resource are concerned, where it has become extensively known

¹⁹⁰ See U.N. Educ., Sci. & Cultural Org. [UNESCO], *Domaine Public Payant*, UNESCO/DA/7, 1, (May 27, 1949), at 1. The existence of *domaine public payant* is a good reminder that, during the extended royalty period, the work is “public” in one respect (standard IP protection has ceased) but not “public” in another respect (*sui generis* IP protection applies). See *supra* text accompanying notes 44-45.

¹⁹¹ See *id.* at 1-3 & tbl., col. 2 (displaying durations of 3 to 175 years). Copyright has a richer and more complicated normative structure in the public domain than does *domaine public payant*. To use a combined metaphor of space, light, and projective geometry, *domaine public payant* is like a shadow of a cube that produces a square, or a shadow of a tesseract (a four-dimensional object) that produces a cube in three-dimensional space. See TONY ROBBIN, *SHADOWS OF REALITY: THE FOURTH DIMENSION IN RELATIVITY, CUBISM, AND MODERN THOUGHT* (2006); Andrew J. Hanson & Pheng A. Heng, *Visualizing the Fourth Dimension Using Geometry and Light*, in IEEE VISUALIZATION: PROCEEDINGS OF THE SECOND CONFERENCE ON VISUALIZATION 321 (IEEE Computer Soc’y Press 1991). Cf. BOYLE, *PUBLIC DOMAIN*, *supra* note 7, at 38-39 (using other spatial metaphors to shed light on the complicated nature of the public domain).

¹⁹² See, e.g., Edwin R. Harvey, *The Domaine Public Payant in Comparative Law with Special Reference to Argentina*, 28 COPYRIGHT BULL. 29 (1994).

¹⁹³ See, e.g., U.N. Educ., Sci. & Cultural Org. [UNESCO], *Draft Policy Guidelines for the Development and Promotion of Public Domain Information*, UNESCO CI-2003/WS/2 (2003) (prepared by Paul Uhler).

¹⁹⁴ See, e.g., Robert Cook-Deegan & Tom Dedeurwaerdere, *The Science Commons in Life Science Research: Structure, Function, and Value of Access to Genetic Diversity*, 58 INT’L SOC. SCI. J. 299 (2006).

¹⁹⁵ Ley No. 27811, *Propuesta de Régimen de Protección de los Conocimientos Colectivos de los Pueblos y Comunidades Indígenas Vinculados a los Recursos Biológicos*, EL PERUANO, DIARIO OFICIAL (Peru), Aug. 10, 2002, available at <http://www.grain.org/brl/?docid=175&lawid=2041> (Spanish) [hereinafter *Ley 27811*]; *Ley 27811*, *Introducing a Protection Regime for the Collective Knowledge of Indigenous Peoples Derived from Biological Resources*, available at <http://grain.org/brl/?docid=81&lawid=207> (English translation) [hereinafter *Ley 27811*]. For commentary, see, e.g., Ana María Pacón, *The Peruvian Proposal for Protecting Traditional Knowledge*, in U.N. CONF. ON TRADE & DEV., *PROTECTING AND PROMOTING TRADITIONAL KNOWLEDGE: SYSTEMS, NATIONAL EXPERIENCES AND INTERNATIONAL DIMENSIONS* 175 (2004).

outside the confines of the indigenous peoples and communities."¹⁹⁶ If "the collective knowledge has passed into the public domain within the previous 20 years,"¹⁹⁷ a percentage of the gross sales of goods developed from the TK goes into the Fund for the Development of Indigenous Peoples.¹⁹⁸

The Peruvian right differs in three main ways from the traditional *domaine public payant*. First, it applies to genetic resources rather than literary or artistic works. Second, it applies even if there was no prior standard IP right that expired. Third, different groups are both the source and the beneficiary of the *sui generis* right, whereas in the case of the traditional *domaine public payant* the source of the original IP right, such as a copyright, is an individual author, though the beneficiary of the *sui generis* right is a group, such as a society of authors.

Is a *sui generis* right of the Peruvian sort, or something close to it, justifiable? In our judgment, property arguments justify only parts of this right. Article 5 of the statute states six "objectives," and these objectives suggest possible arguments for the *sui generis* right:

- (a) To promote respect for and the protection, preservation, wider application and development of the collective knowledge of indigenous peoples;
- (b) To promote the fair and equitable distribution of the benefits derived from the use of that collective knowledge;
- (c) To promote the use of the knowledge for the benefit of the indigenous peoples and mankind in general;
- (d) To ensure that the use of the knowledge takes place with the prior informed consent of the indigenous peoples;
- (e) To promote the strengthening and development of the potential of the indigenous peoples and of the machinery traditionally used by them to share and distribute collectively generated benefits under the terms of this regime;
- (f) To avoid situations where patents are granted for inventions made or developed on the basis of collective knowledge of the indigenous peoples of Peru without any account being taken of that knowledge as prior art in the examination of the novelty and inventiveness of the said inventions.¹⁹⁹

¹⁹⁶ Ley 27811, *supra* note 195, at art. 13; Law 27811, *supra* note 195, at art. 13.

¹⁹⁷ Law 27811, *supra* note 195, at art. 13.

¹⁹⁸ See Taubman & Leistner, *supra* note 71, at 147 (explaining the operation of the Peruvian statute and its similarity to *domaine public payant*). See also Daniel J. Gervais, *The Internationalization of Intellectual Property: New Challenges from the Very Old and the Very New*, 12 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 929, 969-70 (2002) (observing that some will see *domaine public payant* as a tax).

¹⁹⁹ Law 27811, *supra* note 195, at art. 5.

Objective (b) relates to distributive justice, which lies outside the scope of this Article.²⁰⁰ Objectives (a), (c), and (e) suggest utility arguments for the Peruvian *sui generis* right. But as with all utility arguments, it is necessary to show that the *sui generis* right conduces to the overall benefit of all affected by the protective regime, which is a daunting empirical task. Nevertheless, objectives (d) and (f) plainly invoke property arguments that we addressed and approved earlier. We stand foursquare behind the claims that defensive protection of TK is justifiable (objective (f)) and that indigenous peoples have a liberty-right and a power to release their TK to others only upon prior informed consent (objective (d)). Still, it is not evident how these claims support a positive *sui generis* right akin to *domaine public payant*.

At this point, defenders of the Peruvian statute could invoke the property argument based on the moral right of the community, where the "community" is one or more indigenous peoples who live in the territory that now makes up the nation of Peru. This move, though, brings into play all of the shortcomings of this argument that were pointed out earlier.²⁰¹ In particular, the argument works much better, if it works at all, for folklore than it does for TK relating to "biological resources,"²⁰² and the Peruvian statute covers only the latter.²⁰³ It works less well for biological-resources TK because knowledge and skill relating to biodiversity mirror less clearly the "personality," or salient collective characteristics, of an indigenous group than does the group's folklore.²⁰⁴

There are some further aspects of the *sui generis* right created by Peru worth noting. First, the right has a term of twenty years, which will not satisfy those who seek indefinite duration. Second, the beneficiary of sums collected is the Fund for the Development of Indigenous Peoples, not the one (or perhaps more than one) indigenous group that came up with the TK.²⁰⁵ Administrative efficiency is one possible rationale for this arrangement, and this reason may apply to the International Seed Treaty as well.²⁰⁶ Third, the statute does not attend with sufficient care to the way in which the TK entered the public domain. Article 13 uses the passive voice in saying "when it [TK] has been made accessible. . . by

²⁰⁰ See *supra* text accompanying note 54.

²⁰¹ See *supra* text accompanying notes 88-102.

²⁰² Law 27811, *supra* note 195, at art. 2(e).

²⁰³ *Id.* at art. 3. See generally Thomas Cottier, *The Protection of Genetic Resources and Traditional Knowledge: Towards More Specific Rights and Obligations in World Trade Law*, 1 J. INT'L ECON. L. 555 (1998); Antony Taubman, *Genetic Resources, in* INDIGENOUS HERITAGE, *supra* note 13, at 181.

²⁰⁴ See *supra* text accompanying note 96.

²⁰⁵ Law 27811, *supra* note 195, at arts. 13, 37-41.

²⁰⁶ See *supra* text accompanying notes 51, 112-14.

mass communication media such as publication."²⁰⁷ If an outsider did so without prior informed consent and profited from the TK, then perhaps compensation is defensible. But if the government of Peru or an indigenous group published the TK in a database like the TKDL,²⁰⁸ then publication should do no more than justify defensive protection. It ought not afford positive protection like that in the compensatory mechanism in the *sui generis* right, any more than the holder of a trade secret, who makes it public, should be able to command payments from those who use what he or she has revealed. Article 13 would also require payment "when the properties, uses or characteristics of a biological resource are concerned, where it [TK] has become extensively known outside the confines of the indigenous peoples and communities."²⁰⁹ This provision is unjustifiably broad. It could apply to an outsider who traveled through Peru and independently discovered the properties, uses, or characteristics of a biological resource.

D. Remedies

The main lines of justifiable remedies for TK infringement seem obvious. To begin, remedies should be available only for justifiable IP rights in TK. Although we do not rule out criminal prosecution for egregious violations, punishment lies outside the bounds of civil law and is not a "remedy" as we use that word. So that leaves, as possible remedies, damages, injunctions, declaratory judgments, and restitution. Because the issue of remedies for TK infringement is so undeveloped, we simply note here two Australian decisions that have figured prominently in the emerging debate over TK rights.

In *Milpurrruru v. Indofurn Party, Ltd.*,²¹⁰ the court awarded damages of AU\$70,000 for cultural harm to aboriginal artists. A Vietnamese manufacturer reproduced on its carpets images from artworks, produced by indigenous artists, that illustrated tradi-

²⁰⁷ Law 27811, *supra* note 195, at art. 13 ("cuando haya sido accesible... a través de medios de comunicación masiva, tales como publicaciones"); Ley 27811, *supra* note 195, at art. 13.

²⁰⁸ On the TKDL, see *supra* text accompanying notes 37, 127-30.

²⁰⁹ Ley 27811, *supra* note 195, at art. 13 ("cuando se refiera a propiedades, usos o características de un recurso biológico que sean conocidas masivamente fuera del ámbito de los pueblos y comunidades indígenas"); Law 27811, *supra* note 195, at art. 13. Like the passive voice, the reflexive verb *se refiera* masks who made the properties, uses or characteristics known and how they came to be known by outsiders.

²¹⁰ 30 I.P.R. 209 (1995) (Austl.). For commentary, see Nicholas Blackmore, *The Search for a Culturally Sensitive Approach to Legal Protection of Aboriginal Art*, 17 COPYRIGHT REP. 57 (1999); Terri Janke, *The Application of Copyright and Other Intellectual Property Laws to Aboriginal and Torres Strait Islander Cultural and Intellectual Property*, 2 ART. ANTIQUITY & L. 13 (1997); Duncan Miller, *Collective Ownership of the Copyright in Spiritually-Sensitive Words: Milpurrruru v. Indofurn Pty Ltd.*, 6 AUSTL. INTELL. PROP. J. 185 (1995); Victor W. Tuomi, *Protecting Aboriginal Folklore: Copyrights and Charter Rights*, 16 CAN. INTELL. PROP. REV. 403 (2000).

tional creation myths. The artists gave no permission either for the use of the images or for the importation of the carpets into Australia. The aboriginal "applicants" (plaintiffs) sued for copyright infringement and violation of trade-practices legislation, and won. Damages were awarded to the applicants collectively, who were then to distribute the money to traditional owners as recognized by aboriginal law.²¹¹

In *Bulun Bulun & Milpurrruru v. R. & T. Textiles Pty. Ltd.*,²¹² the court ordered equitable relief. Johnny Bulun Bulun, a member of the Ganalpingu aboriginal people, created a painting that reflected the ritual knowledge of his people. The question was whether Bulun Bulun could transfer the painting to outsiders. The court concluded that he and the Ganalpingu community had a relation of mutual trust and confidence. As a result, he could not legally exploit the painting in violation of Ganalpingu customary law. If he did transfer the painting to an outsider in accordance with Ganalpingu custom, and if the transferee later infringed the copyright, then Bulun Bulun had to take legal action to obtain relief from the infringement and to restrain further infringement of the work.²¹³

Both *Milpurrruru* and *Bulun Bulun* involve folklore and original works by known living artists.²¹⁴ It is debatable whether the courts would or should grant similar remedies if the works were created by deceased persons, by persons whose names are unknown, or were aboriginal copies of prehistoric works. It is likewise debatable whether analogous remedies would or should be available for TK in, say, farming methods or genetic resources. Because the substantive law of IP rights in TK remains so unsettled, it is understandable that the remedial issues are largely unexplored.

VI. CONCLUSION

The growing global controversy over the protection of TK pits competing views about the entitlements of indigenous peoples, the purpose and place of IP rights, and the historical responsibilities of wealthy individuals and nations against one another. Proponents of TK rights often employ the rhetoric of theft and piracy

²¹¹ *Milpurrruru*, 30 I.P.R. 209.

²¹² 41 I.P.R. 513 (1998) (Austl.). For commentary, see Colin Golvin, *Aboriginal Art and Copyright: The Case for Johnny Bulun Bulun*, 11 EUR. INTELL. PROP. REV. 346 (1989).

²¹³ Cf. *Foster v. Mountford*, 29 F.L.R. 233 (1976) (Austl.) (awarding an interlocutory injunction precluding the publication of a book by the defendant outsider anthropologist, Dr. Mountford, which contained information of religious and cultural significance to an aboriginal tribe that had given him the information in confidence).

²¹⁴ Lucas-Schloetter, *supra* note 126, at 386; Tuomi, *supra* note 210, at 410-11.

to buttress their view that TK is, or ought to be, a form of property that receives protection under domestic and international law. Because we take this rhetoric seriously, we have sought to explore how philosophical rationales for property might justify TK rights.

These rationales make at best an uneasy case for a robust package of TK rights. More precisely, the arguments examined do not justify the robust package of TK rights set forth in Part II.²¹⁵ At best they support a modest package of rights. In particular, we find scant support for the idea that all of the rights in this package should be of indefinite duration.²¹⁶ This modest package of rights has several elements. Some TK ought to be protected by the law of trade secret, in the same way that firms employ the law of trade secret to shelter knowledge from competitors.²¹⁷ TK that serves as the basis of a patent issued to an outside inventor ought to be a ground for invalidating the patent if there is an insufficient inventive step between the underlying TK and the claimed invention.²¹⁸ Some TK ought to be protected by trademarks and geographic indications.²¹⁹ And if the moral right of an author can generate a community right to TK—a proposition that remains highly uncertain—the community may have rights pertaining to disclosure and attribution.²²⁰ Nevertheless, the justifications we present argue in favor only of narrow, context-dependent items in the large and multifarious basket called TK. They offer no justification for robust TK protection, and thus do not give TK advocates what they appear to seek.

We recognize, however, that the debate over the legal protection of TK is young, and we do not claim to have analyzed definitively the merits of TK protection. To take just one example, consider our argument that descriptive TK is nonrivalrous whereas land, minerals, and artifacts are rivalrous.²²¹ Against us, some might contend that until fifty years ago some of what we say about normative TK was said about indigenous peoples and their land rights: to wit, that indigenous "possession" of land was nomadic, not sufficiently intensive, impermanent, unproductive, transgenerational, and collective-but-not-corporate.²²² Native peoples might have temporary possessory rights in land, but not title or full ownership. Given that it is widely acknowledged that dispossession

²¹⁵ See *supra* text accompanying note 20 (robust package).

²¹⁶ See *supra* text accompanying notes 38, 47, 53, 57-59, 75, 158-60, 204.

²¹⁷ See *supra* text accompanying notes 48, 65-66, 148, 208.

²¹⁸ See *supra* text accompanying notes 5, 29-31, 36, 123-49.

²¹⁹ See *supra* text accompanying note 9, 22, 46-47, 117-22, 168-82.

²²⁰ See *supra* text accompanying note 88-102, 154, 167, 201-204.

²²¹ See *supra* text accompanying note 70.

²²² See generally *Johnson v. McIntosh*, 21 U.S. (8 Wheat.) 543 (1823) (Marshall, C.J.); *Tee-Hit-Ton Indians v. United States*, 348 U.S. 272 (1955).

of land took place, and given that the arguments for that dispossession are now widely rejected, we are mindful that some may see analogies between rejecting the arguments in the case of land rights and rejecting the arguments for robust TK rights, and contend that both rejections are insupportable. And yet, until these analogies are articulated in satisfying detail and rigorous arguments are constructed upon them, we stand by the position to which the analysis of this Article has led us.

The modest TK rights we think defensible are unlikely to satisfy many TK proponents. In the 1930s, Felix S. Cohen argued that many who favor extensive rights in trademarks and trade names take refuge in the following syllogism: Someone has "created a thing of value; a thing of value is property; the creator of property is entitled to protection against third parties who seek to deprive him of his property."²²³ Cohen derided this reasoning as circular, as it is often legal protection that gives the thing its value in the first place. Certainly, he thought, many "things of value" are not, and ought not be, protected via property rights. We agree with this sentiment. Considerations of liberty and competition must counterbalance concerns about piracy and unjust enrichment. The creation and protection of TK rights require some further normative justification, and we have shown here that existing philosophical justifications for property do not sustain a robust package of rights in TK.

It is nonetheless easy to grasp why TK advocates find the existing IP system, which favors discrete innovation and creation over more gradual and incremental processes, unfair to indigenous peoples. We understand why many TK advocates are suspicious of appeals to a vibrant public domain, for the trump cards used against TK rights often seem to be colored "Public Domain."²²⁴ Perhaps TK rights can be justified in some other way. For example, theories of distributive justice or human rights might support more elaborate rights. These theories, however, fall outside the scope of this Article. That said, as a political matter governments create and allocate property rights for many reasons, and perhaps they will do so with regard to TK. Our argument here is simply that whatever approach is taken to defend TK rights, to protect TK robustly is far more complicated than it might at first glance appear, and in many respects would require major deviations from existing justifications for property.

²²³ Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 815 (1935).

²²⁴ See, e.g., Chander & Sunder, *supra* note 7.