

CIGI Papers No. 176 – June 2018

# Traditional Knowledge and the Public Domain

Ruth L. Okediji





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Centre for International  
Governance Innovation

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## About the Author

Ruth L. Okediji is chair of the International Law Research Program's expert working group on international intellectual property, traditional knowledge and genetic resources at the Centre for International Governance Innovation (CIGI). She is the Jeremiah Smith, Jr. Professor of Law at Harvard Law School and serves as co-director of the Berkman Klein Center for Internet & Society.

Ruth's research at CIGI focuses on the design of a legal framework for the regulation of genetic resources and traditional knowledge, with a particular emphasis on policy and regulatory mechanisms that can best align national policies to support Indigenous innovation. Her current project at CIGI involves the development of case studies that map and analyze modalities for the protection and commercialization of traditional knowledge in light of emerging advances in science, and trends in regional/multilateral trade agreements and intellectual property harmonization.

An internationally renowned scholar, teacher and expert in international intellectual property law, Ruth and her work have influenced governments, international organizations and regional economic communities on issues such as access to medicines, copyright and the right to culture, and the relationship among intellectual property, innovation institutions and economic development.

From 2011 to 2012, she was a member of the US National Academies of Sciences, Engineering and Medicine Board on Science, Technology, and the Economic Policy Committee on the Impact of Copyright Policy on Innovation in the Digital Era. In 2013, she served as the lead technical negotiator for the federal government of Nigeria at the World Intellectual Property Organization's Diplomatic Conference to Conclude a Treaty to Facilitate Access to Published Works by Visually Impaired Persons and Persons with Print Disabilities (Marrakesh Treaty) and has continued to provide expert assistance to the Africa Group on a variety of intellectual property negotiations. In 2015, then UN Secretary-General Ban Ki-moon appointed her to the High-Level Panel on Access to Medicines.

Ruth's most recent books are *Copyright Law in an Age of Limitations and Exceptions* (Cambridge University Press, 2017) and (as co-author with Laurence R. Helfer, Molly K. Land and Jerome H. Reichman) *The World Blind Union Guide to the Marrakesh Treaty* (Oxford University Press, 2017).

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## About the Program

The International Law Research Program (ILRP) at CIGI is an integrated multidisciplinary research program that provides leading academics, government and private sector legal experts, as well as students from Canada and abroad, with the opportunity to contribute to advancements in international law.

The ILRP strives to be the world's leading international law research program, with recognized impact on how international law is brought to bear on significant global issues. The program's mission is to connect knowledge, policy and practice to build the international law framework — the globalized rule of law — to support international governance of the future. Its founding belief is that better international governance, including a strengthened international law framework, can improve the lives of people everywhere, increase prosperity, ensure global sustainability, address inequality, safeguard human rights and promote a more secure world.

The ILRP focuses on the areas of international law that are most important to global innovation, prosperity and sustainability: international economic law, international intellectual property law and international environmental law. In its research, the ILRP is attentive to the emerging interactions among international and transnational law, Indigenous law and constitutional law.

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## Acronyms and Abbreviations

<b>CBD</b>	Convention on Biological Diversity
<b>FRAND</b>	fair, reasonable and non-discriminatory
<b>GIs</b>	geographical indications
<b>GMO</b>	genetically modified organism
<b>GRs</b>	genetic resources
<b>IGC</b>	Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore
<b>IP</b>	intellectual property
<b>L&amp;Es</b>	limitations and exceptions
<b>UNDRIP</b>	United Nations Declaration on the Rights of Indigenous Peoples
<b>UNESCO</b>	United Nations Education, Scientific and Cultural Organization
<b>WIPO</b>	World Intellectual Property Organization



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## Executive Summary

Legal protection for traditional knowledge raises difficult questions at the intersection of innovation policy and knowledge governance, with important implications for Indigenous peoples' rights. A significant source of tension in ongoing discussions internationally has been the difficulty in delineating entitlement interests in traditional knowledge consistent with prevailing doctrinal limits to intellectual property (IP) rights, such as the public domain.

The public domain represents a body of knowledge and information available to the public to access and use freely. When indiscriminately applied, the public domain construct maps perfectly onto, and extends a historically prejudicial view of, the knowledge of Indigenous peoples as part of a global commons. Since the latter part of the twentieth century, however, the importance and value of traditional knowledge has been codified in a growing complex of soft and hard law instruments requiring countries to recognize the rights of Indigenous groups in the knowledge they cultivate and produce, their freedom to choose the cultural forms in which such knowledge is embodied and applied, and their right to define terms that govern access to, and use of, such knowledge. As formal recognition of traditional knowledge has increased, national governments, Indigenous groups and international organizations remain engaged in a protracted debate over the appropriate modality and terms for the protection of traditional knowledge alongside the continuously evolving global IP system.

Just as the public domain arguments have been effectively marshalled against expansive IP rights, resistance to traditional knowledge protection has also been justified, at least partly, by reference to the importance of protecting the public domain. But the public domain cannot be served up at will to deflect the legitimate interests of traditional knowledge holders. The public domain is not a universal "gotcha!" that justifies a ransom in the form of weak or symbolic protection of Indigenous peoples' knowledge. Properly applied, the public domain does not constitute a barrier to the effective protection of traditional knowledge.

This paper advances the following principal ideas:

- There is no international public domain nor is there any treaty requirement that demands recognition of, or compliance with, the public domain. Nations have significant policy space to define the public domain consistent with their national values and priorities. Accordingly, the protection of traditional knowledge poses no significant threat to the public domain nor to international IP norms. Countries are free to grant higher levels of protection, including protection for other knowledge goods, in ways that may be entirely different from (or even at odds with) conventional IP rights.
- There is a distinct public domain associated with each category of IP. For example, the public domain in copyright law is differently constituted than the public domains in patent or trademark law. A custom-built public domain for traditional knowledge is both feasible and desirable. Delineating a public domain specific to traditional knowledge should assuage concerns among critics that new proprietary rights for Indigenous knowledge goods pose a threat to science and innovation.
- A traditional knowledge public domain that reflects Indigenous conceptions, and that balances the rights of Indigenous peoples and local communities with the public at large, is consistent with the prevailing design of national and global IP norms. One approach to constructing such a public domain is a tiered categorization that recognizes types of traditional knowledge based on the degree of authorized diffusion to the public. Each category of traditional knowledge is associated with specific minimum rights consistent with the values of Indigenous groups and local communities: sacred or secretly held traditional knowledge (which should be afforded economic and moral rights); closely held traditional knowledge (which should also be afforded economic and moral rights); widely diffused traditional knowledge (which should be afforded the right of attribution); and generic traditional knowledge (which should not be afforded rights).
- Widely diffused and generic forms of traditional knowledge pose the most difficult challenge with respect to a public domain for traditional knowledge. In exceptional circumstances, which should be decided at the national level, countries

may adopt a liability rule to address cases in which an Indigenous group or local community seeks to reclaim ownership rights because global dissemination of the knowledge was the result of unauthorized access and disclosure to the public, *and* the knowledge remains vital to the cultural identity and distinguishing characteristics of the Indigenous group.

Reconciling traditional knowledge with the doctrinal limits of the IP system is an important aspect of advancing multilateral discussions about the nature and design of a legal framework that facilitates legitimate trade in knowledge goods that utilize or embody traditional knowledge. Policy makers must consider approaches to protection that protect — and, indeed, strengthen — the values and productive capacity of traditional knowledge systems, while also preserving the important role of the public domain in other spheres of knowledge. At least conceptually, a thoughtfully designed, custom-built public domain for traditional knowledge would align traditional knowledge protection with the overall architecture of the global innovation framework. As deployed nationally, it could enhance rights in traditional knowledge and optimize returns — economic, cultural and spiritual — to Indigenous groups for their creative works.

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## Introduction

The protection of traditional knowledge is among the most vexing and morally compelling issues in international IP law today. According to a widely used description, traditional knowledge consists of “know-how, skills, innovations, practices, teachings or learnings”<sup>1</sup> and it is “developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.”<sup>2</sup> Traditional knowledge is, in short, a *constitutional* structure — that is, it reflects a governing collection of principles around which

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1 World Intellectual Property Organization (WIPO), Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC), *The Protection of Traditional Knowledge: Draft Articles*, 31st Sess, WIPO/GTRKF/IC/31/4 (2016), Annex at 5, online: <[www.wipo.int/edocs/mdocs/tk/en/wipo\\_grtkf\\_ic\\_31/wipo\\_grtkf\\_ic\\_31\\_4.pdf](http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_31/wipo_grtkf_ic_31_4.pdf)>.

2 *Ibid.*

the institutions of a group are developed, and within which values and norms are cultivated, dynamically implemented and sustained. This knowledge continues to evolve in response to, and in interaction with, external forces.

Efforts to establish minimum standards of entitlement-like protection that accommodate these features, while also preserving spiritual and cultural values important to Indigenous peoples, have been deeply contested. Amid the notable arguments against recognition of proprietary rights for traditional knowledge holders, the most provocative is the claim that such knowledge is already in the public domain.<sup>3</sup>

The treatment of traditional knowledge as merely an extension of the public domain has significant implications for the welfare and economic development opportunities of Indigenous groups. This view undermines treaties that already acknowledge or require protection for the rights of Indigenous groups and traditional knowledge holders,<sup>4</sup> and it violates central tenets of the international IP framework, such as non-discrimination and protection for the non-economic interests (i.e., moral rights) associated with certain cultural goods.

More pointedly, the claim that protection for traditional knowledge is largely pre-empted by “the” public domain lacks support in international IP law. There is no widely accepted view of the public domain and competing views of

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3 See e.g. Stephen R Munzer & Kal Raustiala, “The Uneasy Case for Intellectual Property Rights in Traditional Knowledge” (2009) 27 *Cardozo Arts & Ent LJ* (“Expansive protection of traditional knowledge would, with some qualifications, remove what is now in the public domain from that domain” at 41); at times, the claim that traditional knowledge is in the public domain is merely the outcome of influential definitional treatments. See e.g. Jamie Boyle, *The Public Domain: Enclosing the Commons of the Mind* (New Haven, CT: Yale University Press, 2008) (“The public domain is material that is not covered by intellectual property rights” at 38). See also Anupam Chander & Madhavi Sunder, “The Romance of the Public Domain” (2004) 92:5 *Cal L Rev* at 1331, 1357.

4 See e.g. *United Nations Declaration on the Rights of Indigenous Peoples*, GA Res 295, UNGAOR, 61st Sess, Supp No 49, UN Doc A/RES/61/295, 46 ILM 1013 (2007) [UNDRIP], online: <[www.un.org/esa/socdev/unpfi/documents/DRIPS\\_en.pdf](http://www.un.org/esa/socdev/unpfi/documents/DRIPS_en.pdf)>; see also *Convention on Biological Diversity*, 5 June 1992, 1760 UNTS 79, 31 ILM 818 arts 1, 8(j) (entered into force 29 December 1993) [CBD]; 2010 *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the 1992 Convention on Biological Diversity*, 29 October 2010, UNEP/CBD/COP/DEC/X/1 (entered into force 12 October 2014) [Nagoya Protocol]; *United Nations Convention on the Protection and Promotion of the Diversity of Cultural Expressions*, 20 October 2005, 2440 UNTS 311 (entered into force 18 March 2017).

the public domain exist at national levels. The public domain is not a legal construct in any of the leading international IP conventions.<sup>5</sup> Finally, the fundamental principle that IP rights are territorial leaves delimitation of the public domain to national laws.

This paper makes three key arguments to address dominant considerations at the interface of traditional knowledge and the public domain. It reflects on, but is not limited to, the ongoing debates at the World Intellectual Property Organization's (WIPO's) IGC.

First, recognition of new categories of property in knowledge goods unavoidably threatens the interests of existing IP owners and could disrupt the global competitive landscape for the long run. The public domain appears to be a rhetorical tool used by transnational actors as a response to attempts by traditional knowledge holders to restrain unbridled access to their knowledge and resources.<sup>6</sup> But the protection of traditional knowledge is not an existential threat to the global public domain because there is no such creature, and neither the rhetoric nor the normative foundations of domestic public domains should constitute barriers to the protection of traditional knowledge.

Second, safeguarding the public domain is unquestionably an important consideration in the optimal design of property rules. Yet, both nationally and in multilateral fora, proponents of the *sui generis* approach to traditional knowledge demand property entitlements *and* eschew policy tradeoffs that are intrinsic to the IP social bargain, including the public domain. A custom-built public domain that aligns with the values of Indigenous groups and local communities should be considered part of a carefully negotiated package of rights in traditional knowledge. Defining the limits of traditional knowledge requires consideration of the interaction between tangible *and* intangible property, both of which fuel the production of cultural goods by Indigenous groups and local communities. Indeed, both types of property interests are implicated in the IGC.

Finally, given the unique features of traditional knowledge, the property/public domain divide that characterizes contemporary IP discourse in leading industrialized countries may represent too narrow a set of options for global norm-setting activities. Setting the public domain in opposition to the entitlement claims of Indigenous groups and local communities ignores a rich set of regulatory options. The deployment of "public domain" terminology could be reoriented to correspond with a range of categories or tiers of traditional knowledge that allow access and use to occur under specified conditions. It is *those* conditions, not the legitimacy of traditional knowledge as a subject of entitlement claims, that should appropriately delineate the public domain for traditional knowledge in any emergent frameworks for protection.

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## Traditional Knowledge and the Public Domain in IP

The history of unauthorized access, use and uncompensated appropriation of property belonging to Indigenous and minority groups, dating back to the so-called age of discovery, underlie justifications for the entitlement-like claims sought by such groups in international fora.<sup>7</sup> Even well into the twentieth century, scientists and researchers from developed countries continued to operate under assumptions that the genetic resources (GRs) and accumulated knowledge in these communities could be freely accessed, used and/or taken.<sup>8</sup> Armed with legal tools, such as "the

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5 Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994, 1869 UNTS 299 art 70 (entered into force 1 January 1995) [TRIPS Agreement].

6 See Jerome H Reichman et al, *Governing Digitally Integrated Genetic Resources, Data, and Literature: Global Intellectual Property Strategies for a Redesigned Microbial Research Commons* (Cambridge, UK: Cambridge University Press, 2016).

7 See e.g. Keith Aoki, "Neocolonialism, Anticommons Property, and Biopiracy in the (Not-so-Brave) New World Order of International Intellectual Property Protection" (1998) 6:1 *Ind J Global Leg Stud* 11 at 46–57 (describing "biopiracy" perpetrated by the Global North against the Global South); Vandana Shiva, *Biopiracy: The Plunder of Nature and Knowledge*, 2nd ed (Berkeley, CA: North Atlantic Books, 2016).

8 See Reichman et al, *supra* note 6 at 50–52 (noting that scientific norms and practices supporting free access by researchers to biodiversity-rich environments in former colonies and developing countries were well established by the 1950s).

common heritage of mankind”<sup>9</sup> and “the public domain,” scientists and international institutions facilitated the development of a global knowledge infrastructure for research and innovation, utilizing plant GRs and traditional knowledge. International regimes for science and research coalesced around the view that those resources were part of an uncharted global commons that could — indeed, should — be freely and methodically exploited.<sup>10</sup>

This appropriation under the guise of the public domain still occurs today. Examples of appropriation of GRs, traditional knowledge and traditional cultural expressions are well documented.<sup>11</sup> In almost all cases, scientists, fashion designers and artists proceed on the assumption that these cultural knowledge goods and/or traditional knowledge are freely available for use. Given this background, developing countries and Indigenous groups justifiably perceive the quintessentially progressive concept of the public domain with deep hostility.

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## Demystifying Traditional Knowledge

There is no single definition of the public domain, but most approaches share an instrumentalist vision: the public domain is a reservoir of resources accessible to the public for creative or consumptive uses. Thus, the public domain is a source of public (intellectual) property.<sup>12</sup> This dominant view of the public domain is oddly juxtaposed with the structure of traditional knowledge and the complex, evolving conditions in which it is generated, curated, applied and shared.

The knowledge systems that produce specific manifestations of traditional knowledge are not organized around utilitarian incentives, nor rights of control and exclusion, that arguably make the public domain integral to the proper balance of the IP system. Further, the entitlement claims sought by Indigenous groups and local communities in various international negotiations are not primarily means to secure economic returns for their investments as IP rights often are. Instead, proprietary interests in traditional knowledge assets offer an important tool for regulating relations with third parties seeking access to those assets and/or their means of production. The right to exclude others, which is so fundamental to property regimes, is precisely what Indigenous peoples seek, and which opponents argue cannot be reconciled with prevailing theories of property. The author of this paper strongly disagrees.

To the extent traditional knowledge fails to satisfy standard property justifications, it is because those justifications are imbued with assumptions that are misaligned with the conditions that inform the productive and creative processes of Indigenous groups and local communities. Nonetheless, even when judged against prevailing IP standards, traditional knowledge and its products are not incompatible with national IP regimes.

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9 This phrase was first introduced in the Preamble to the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict. Its application placed certain geographical areas, such as the seabed and ocean floor, off-limits from claims of ownership or possession. See *United Nations Convention on the Law of the Sea*, 10 December 1982, art 136 (entered into force 16 November 1994).

10 For example, the International Undertaking on Plant Genetic Resources (1983) was based on “the universally accepted principle that plant genetic resources are a heritage of mankind and consequently should be available without restriction” (article 1). The Preamble to the Recommendation for the Protection of Movable Cultural Property (1964) states that “[m]ovable cultural property representing the different cultures forms part of the common heritage of mankind.” Similarly, the Preamble to the Recommendation on the Safeguarding of Traditional Culture and Folklore (1989) states that “folklore forms part of the universal heritage of humanity,” as did the Preamble to the UNESCO-WIPO Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions (1982) (“folklore represents an important part of the living cultural heritage of the nation”). See also Michael Halewood, “International Efforts to Pool and Conserve Genetic Resources in Times of Radical Legal Change” in Mario Cimoli et al, eds, *Intellectual Property Rights: Legal and Economic Challenges for Development* (Oxford, UK: Oxford University Press, 2014) 288.

11 See Elisabeth Pain, “French institute agrees to share patent benefits after biopiracy accusations”, *Science* (10 February 2016), online: <[www.sciencemag.org/news/2016/02/french-institute-agrees-share-patent-benefits-after-biopiracy-accusations](http://www.sciencemag.org/news/2016/02/french-institute-agrees-share-patent-benefits-after-biopiracy-accusations)> (reporting on the *quassia amara* controversy). See also William Fisher, “The Puzzle of Traditional Knowledge” (2018) 67 *Duke LJ* 1511 (discussing the case and other recent examples).

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12 See also James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society* (Cambridge, MA: Harvard University Press, 1997).

## Multiple Authorship

Critics of entitlement-based protection for traditional knowledge point to characteristics such as collective/group authorship as a challenge for recognizing property rights in traditional knowledge. Leading scholars, however, have spent considerable time debunking the historical trope of the romantic author<sup>13</sup> — a caricature of the creative process upon which much of modern copyright law rests. Multiple authored or invented works are not uncommon in the contemporary IP landscape. Indeed, in a number of disciplines group authorship is the norm,<sup>14</sup> and rare is the patented invention that has a sole inventor.<sup>15</sup> Additionally, in the digital landscape, group authorship of literary and artistic works is a widespread practice with significant technical and economic advantage. These advantages are paradigmatically denoted in open-source software projects,<sup>16</sup> reflecting a commons-based approach to innovation that is now an accepted and, in some cases, preferred model for the production of knowledge goods.<sup>17</sup>

## Subject Matter

Since the late twentieth century, IP subject matter has undergone an undisciplined expansion, propelled initially by advances in biotechnology and followed by rapid gains in the digital frontier. Rapid technological change has facilitated claims of ownership for creative goods along an ever-widening spectrum. Most IP categories do not have robust subject matter limits, and often what one category of IP law disallows finds a home in another. Leading examples are computer software, which straddles the boundaries of patent and copyright law; and architectural designs, which can straddle design patents, copyright and trademark protection. There is nothing intrinsically pure or absolute about existing categories of IP

subject matter. As such, expressions of traditional knowledge are easily correlated with the IP subject matter categories. Protection for traditional knowledge could also be reinforced in the broader, related category of unfair competition law.<sup>18</sup>

Indeed, the expansion of IP subject matter has already facilitated overt overlap with the normative themes of traditional knowledge systems. For example, trademark law — and its new global variant, geographical indications (GIs) — is a way of linking certain knowledge goods with the community from which they originate,<sup>19</sup> something that is quintessential to the demands of Indigenous peoples and local communities.

## Duration

Critics of property rights in traditional knowledge often cite its potentially indefinite duration as unorthodox and unmanageable.<sup>20</sup> However, this is less different from IP than it may initially appear; the arc of duration across IP subject matter bends toward lengthier terms.<sup>21</sup> No IP regime formally allows perpetual protection. In practice, however, there are ways to circumvent term limits,<sup>22</sup> to otherwise extend the natural lead time provided by a specific category of IP rights,<sup>23</sup> and to elude judicial and doctrinal limits that IP law would otherwise impose.

13 See generally Margaret Chon, “The Romantic Collective Author” (2012) 14 Vand J Ent & Tech L 829; Peter Jaszi, “Toward a Theory of Copyright: The Metamorphoses of ‘Authorship’” (1991) 40:2 Duke LJ 455; James Boyle, “A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading” (1992) 80:6 Cal L Rev 1413.

14 Chon, *supra* note 13 at 839 (describing collaborative authorship in scientific disciplines).

15 See generally Mark A Lemley, “The Myth of the Sole Inventor” (2012) 110:5 Mich L Rev 709.

16 Lawrence Lessig, *Code: Version 2.0* (New York, NY: Basic Books, 2006).

17 See Yochai Benkler, “Law, Innovation, and Collaboration in Networked Economy and Society” (2017) 13 Ann Rev L & Soc Sci 231; Jonathan Zittrain, “The Generative Internet” (2006) 119 Harv L Rev 1975.

18 Fair, reasonable and non-discriminatory (FRAND) licensing is one example of legal regimes that crosses from the borders of IP law to unfair competition and anti-trust law. See e.g. Benjamin Li, “The Global Convergence of FRAND Licensing Practices” (2016) 31 Berkeley Tech LJ 429.

19 See Daniel J Gervais, “Reinventing Lisbon: The Case for a Protocol to the Lisbon Agreement (Geographical Indications)” (2010) 11 Chicago J Intl L 67; see also Justin Hughes, “Champagne, Feta, and Bourbon: The Spirited Debate about Geographical Indications” (2006) 58 Hastings LJ 299.

20 See e.g. Munzer & Raustiala, *supra* note 3 at 78.

21 See *Eldred v Ashcroft*, 537 US 186 (2003); *Directive 2011/77/EU of the European Parliament and of the Council of 27 September 2011 amending Directive 2006/116/EC on the term of protection of copyright and certain related rights*, [2006] OJ, L 265.

22 17 USC § 103 (2003); see also *Eldred v Ashcroft*, *supra* note 21.

23 See 37 CFR (2002); *Trade-marks Act*, RSC 1985, c T-13.

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## The Public Domain Lacks a Uniform Definition

Despite the significant overlap, traditional knowledge proponents remain largely inhospitable to the idea that the IP regime is an acceptable response to the entitlement claims of Indigenous groups. A significant part of this resistance is related to the justifiable concern that, as deployed within the IP system, the public domain construct will deny traditional knowledge holders the ability to maintain the distinctiveness of their productive processes, to keep vibrant their cultural institutions and to otherwise flourish within their systems of knowledge governance.

In jurisdictions where traditional knowledge is already protected by national law, unlawful access and use is sanctionable.<sup>24</sup> Such enforcement can, and probably should, include an option to deny enforcement of any IP rights subsequently obtained for creative goods that unlawfully incorporate the traditional knowledge.<sup>25</sup> Such an outcome would not be proscribed under prevailing international law,<sup>26</sup> and could prove to be a highly effective deterrent to unauthorized access and use of traditional knowledge.

For Indigenous groups, direct engagement with the idea of the public domain by the international community is both necessary and inevitable. The challenge is that there is no uniform definition of the public domain. The allocation of property rights, including rights in IP or rights in traditional knowledge, are a classic exercise of sovereign prerogative. Accordingly, what constitutes the public domain also flows from such sovereign recognition. Negotiations about the public domain should begin from recognition of two fundamental points:

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24 See Carol M Rose, "Expanding the Choices for the Global Commons: Comparing Newfangled Tradable Allowance Schemes to Old-Fashioned Common Property Regimes" (1999) 10:1 *Duke Envtl L & Pol'y F* 45, 51 [Rose, "Expanding the Choices"].

25 William Fisher, "Two Thoughts About Traditional Knowledge" (2007) 70:2 *Law & Contemp Probs* 131.

26 Copyright law in the United States contains an analogous principle: successful plaintiffs cannot claim defendants' profits that are attributable to expressions the plaintiffs do not own. See *Frank Music Corp v Metro-Goldwyn-Mayer Inc*, 886 F (2d) 1545 at 1549 (9th Cir 1989).

## The Public Domain Is Territorial

Both the Paris and Berne Conventions reflect the axiomatic principle that IP rights are territorial. Extraterritorial application of the public domain is most certainly subject to the same rules as extraterritorial application of IP (and other) laws; namely, subject to a limited set of exceptions, one state's laws will not be applied to conduct occurring in another state.<sup>27</sup> Moreover, at least in some cases, a state may exercise jurisdiction over conduct that takes place in its territory or conduct that has direct and significant effects in its territory.<sup>28</sup>

Against this backdrop of governing rules, the public domain rhetoric merely reinforces a legal basis for defending national rights in traditional knowledge, namely, territoriality. As legal recognition of traditional knowledge increases worldwide, the principle of comity among nations may persuade a country to recognize when the laws of another sovereign have been violated.<sup>29</sup> The Nagoya Protocol, for example, mandates transnational cooperation to address violations of access and benefit-sharing legislation in a country that is party to the agreement.<sup>30</sup>

## Multiple Public Domains Already Exist

There is no single public domain, even within a particular country. Rather, every type of IP has a differently constituted public domain. In copyright law, for example, the public domain includes unprotectable subject matter (such as ideas or facts) and works whose copyrights have expired.<sup>31</sup> In some countries, copyright's public domain may also include works of the federal

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27 Louis Henkin, *How Nations Behave*, 2nd ed (New York, NY: Columbia University Press, 1979) ("Except as limited by international law or treaty, a nation is master in its own territory" at 17).

28 Curtis A Bradley, "Territorial Intellectual Property Rights in an Age of Globalism" (1997) 37 *Va J Intl L*.

29 As defined by the United States Supreme Court, "comity of nations" is "the recognition which one nation allows within its territory to the legislative, executive or judicial acts of another nation, having due regard both to international duty and convenience, and to the rights of its own citizens, or of other persons who are under the protection of its laws." See *Hilton v Guyot*, 159 US 113 (1895).

30 *Nagoya Protocol*, *supra* note 4, art 15.

31 17 USC § 102(b).

government.<sup>32</sup> The public domain in patent law similarly comprises ineligible subject matter, expired patents, invalidated patents and, in some jurisdictions, prematurely expired patents for which maintenance fees were not paid.<sup>33</sup> Of all the IP categories, trademark law arguably has the narrowest public domain. There, the public domain consists mainly of subject matter that has lost its source-identifying function. While all other forms of IP have statutorily imposed term limits, trademarks in most countries do not. As long as the mark continues to serve as an indication of source, it remains entitled to all the exclusive rights associated with this form of property.

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## The Public Domain as a Policy Tool

Not only is the public domain dissimilarly constituted in the various IP categories, the public domain(s) serve important welfare functions in each of these subject areas. The public domain in patent law serves an explicit role in the innovation ecosystem, evidenced by carefully delineated exclusions to eligibility.<sup>34</sup> Laws of nature, abstract ideas and living things are barred from patentability in many countries on the view that granting exclusive rights to such fundamental building blocks of knowledge threatens innovation.<sup>35</sup> In many other jurisdictions, additional patentable subject matter limits are imposed

both to protect innovation and, sometimes, to address broader moral considerations.<sup>36</sup>

Concerns about furthering innovation and creativity are also evident in copyright law's conception of the public domain. In addition to the prohibition on protection for ideas, also ineligible for copyright protection are systems and processes.<sup>37</sup> Add to this stock phrases, short words and a host of other exclusions based on functionality,<sup>38</sup> and it becomes evident that copyright's public domain serves a number of public purposes, including safeguarding the right to participate in culture.<sup>39</sup> Copyright's public domain polices boundaries between the public interest and private reward, and between freedom to create and rights to control the fruit of one's labour, and it helps channel creativity into the appropriate IP subject matter fields.<sup>40</sup>

The innovation function of the public domain in patent and copyright laws, respectively, is expressed not only in the statutorily required eligibility criteria but also in a range of limitations and exceptions (L&Es). A number of L&Es facilitate competition and the exercise and enjoyment of personal freedoms, such as privacy and freedom of expression.<sup>41</sup> The complex relationship between market-oriented regulation of property rights and the public welfare interest in ensuring that downstream innovators and creators have adequate access to the building blocks of creativity is managed through a dynamic balance of eligibility rules, proprietary rights, L&Es and the public domain.<sup>42</sup>

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32 See e.g. 17 USC § 105 (2012) ("Copyright protection under this title is not available for any work of the United States Government"); but see Ruth L Okediji, "Government as Owner of Intellectual Property? Considerations for Public Welfare in the Era of Big Data" (2016) 18 Vand J Ent Tech L 331 ("The public domain status of federal government works is a deliberate policy choice justified in reference to the public interest although...there are important exceptions to the rule" at 335).

33 See e.g. 35 USC § 41(b) (providing for the expiration of a patent in the event that maintenance fees are unpaid).

34 WIPO, Committee on Development and Intellectual Property, *Study on Patents and the Public Domain (II)*, 12th Sess, CDIP/12/INF/2 REV. (2013), online: <[www.wipo.int/edocs/mdocs/mdocs/en/cdip\\_12/cdip\\_12\\_inf\\_2\\_rev.pdf](http://www.wipo.int/edocs/mdocs/mdocs/en/cdip_12/cdip_12_inf_2_rev.pdf)>.

35 See Graeme B Dinwoodie & Rochelle Cooper Dreyfuss, "International Intellectual Property Law and the Public Domain of Science" (2004) 7:2 J Intl Econ L 431 (2004).

36 Margo A Bagley, "The New Invention Creation Activity Boundary in Patent Law" (2009) 51 Wm & Mary L Rev 577.

37 See Pamela Samuelson, "Why Copyright Excludes Systems and Processes from the Scope of Its Protection" (2007) 85 Tex L Rev 1921; *TRIPS Agreement*, *supra* note 5, art 9(2).

38 See 37 CFR § 202.1(a).

39 See Boyle, *supra* note 3; Benkler, *supra* note 17.

40 *Baker v Selden*, 101 US 99, 102 (1880) ("To give to the author of the book an exclusive property in the art described therein, when no examination of its novelty has ever been officially made, would be a surprise and a fraud upon the public. That is the province of letters-patent, not of copyright").

41 Pamela Samuelson, "Justifications for Copyright Limitations and Exceptions" in Ruth L Okediji, ed, *Copyright Law in an Age of Limitations and Exceptions* (Cambridge, UK: Cambridge University Press, 2017) [Okediji, *Copyright Law*].

42 See generally Okediji, *Copyright Law*, *supra* note 41; see also Pamela Samuelson & Suzanne Scotchmer, "The Law and Economics of Reverse Engineering" (2002) 111 Yale LJ 1575; *Eldred v Ashcroft*, *supra* note 21, 219–20 (describing the role of the fair use doctrine in facilitating public expression).

Furthermore, because determinations of subject matter eligibility and conditions for maintaining title in IP assets are defined at the national level, the public domain is largely shaped by domestic, not international, law. As noted earlier, a resource that exists in the public domain of one country may not exist in the public domain of another, just as a book may be in the public domain of one country and still under copyright protection in another, or a DNA sequence may be patented in one jurisdiction and in the public domain in another.

Finally, the consequences of public domain status differ among the different types of IP. Some resources in the public domain might still have certain exclusive rights that attach to them. A good example is an author's moral rights, which survive expiration of the economic rights and may last well beyond the author's death.<sup>43</sup>

These considerations illustrate the limits of a monolithic conception of "the" public domain. IP law envisages many public domains, with each distinctly constituted and, at times, overlapping. The public domain can be expressed, shaped or designed to suit the particular features and function of the property regime to which it relates. As such, national public domains are not static; their contours will shift depending on the policy objectives of the underlying domestic property regime, and they may include resources that are not entirely free from constraints and that remain associated with property entitlements. As a socio-legal construct, the public domain can be, and is often, structured in view of the goals and objectives policy makers seek to promote within a specific legal order, including the legal orders of Indigenous groups. As such, a public domain for traditional knowledge is possible and, arguably, desirable.

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43 *Berne Convention for the Protection of Literary and Artistic Works*, 9 September 1886, 25 UST 1341, 828 UNTS 221 art 15(4), art 6bis (amended 28 September 1979) [Berne Convention].

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## Challenges of the Orthodoxy of the Public Domain for Traditional Knowledge

The comparison between traditional knowledge and IP has drawbacks, in particular since advocates for the former are not typically interested in IP analogues. Nonetheless, as the author has discussed, the kind of rights that traditional knowledge holders seek have particularly strong parallels in copyright and trademark law. Any international regime for traditional knowledge will be shaped both in opposition to, and in coordination with, the universe of existing IP rights in which the public domain plays an integral role. How well the public domain is structured in the context of traditional knowledge will depend on a principled consensus about the rights of resource holders to assert control over their knowledge assets and to defend the lifestyles and institutions that produce them.

## Indigenous Peoples' Knowledge Rights in International Law

Several international legal instruments already recognize limited rights of control for Indigenous peoples. Most notably, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)<sup>44</sup> provides that "Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as...artefacts, designs, ceremonies, technologies and visual and performing arts and literature."<sup>45</sup> Article 31(1) of UNDRIP further provides that "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and

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44 See UNDRIP, *supra* note 4.

45 *Ibid*, art 11(1).

traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.<sup>46</sup>

In the same vein, the Convention on Biological Diversity (CBD)<sup>47</sup> and its Nagoya Protocol<sup>48</sup> explicitly defend the right of Indigenous groups to hold their knowledge, to control access to it and to benefit from its utilization.<sup>49</sup> These rights establish a strong normative baseline for claims in favour of traditional knowledge protection under an international regime similar to the great conventions in IP.

## Indigenous Peoples' Knowledge Rights in National Law

Countries are also increasingly enacting laws to protect traditional knowledge. Brazil passed a law in 2015 that “regulates access to components of the genetic heritage, protection of and access to associated traditional knowledge and the fair and equitable sharing of benefits for the conservation and sustainable use of Brazilian biodiversity.”<sup>50</sup> One of the stated purposes of New Zealand’s Patents Act 2013 is to “address Māori concerns relating to the granting of patents for inventions derived from indigenous plants and animals from Māori traditional knowledge.”<sup>51</sup> China also passed a cultural heritage protection law in 2013; Kenya did so in 2016; South Africa has an Indigenous knowledge protection bill currently before Parliament; and some member states of the African Regional Intellectual Property

Organization have ratified the Swakopmund Protocol to protect traditional knowledge.<sup>52</sup>

This national trend toward traditional knowledge protection will require reconsideration of the structural and normative harmonization that characterizes international IP law today. Given a rich diversity in the national implementation of global IP obligations, the unavoidable interaction among the various categories of IP and traditional knowledge suggests an urgent need for new mechanisms to police the cross-border acquisition of IP rights, in particular where such rights may also extend to the knowledge of Indigenous groups and local communities.<sup>53</sup> In one sense, this is precisely what the Nagoya Protocol and a mandatory disclosure of origin regime for GRs and associated traditional knowledge could ably facilitate.<sup>54</sup>

Deploying or leveraging the public domain to refute the normative and moral impulse in favour of a multilateral framework recognizing minimum standards for the protection of traditional knowledge is inconsistent with the underlying logic of the global IP system. It also portends deep fractures in the emerging regime complex for the global governance of Indigenous knowledge assets.<sup>55</sup> Certainly, narrow rights in traditional knowledge appear facially consistent with a

46 *Ibid*, art 31(1).

47 See CBD, *supra* note 4.

48 See Nagoya Protocol, *supra* note 4.

49 For example, article 7 of the Nagoya Protocol states, “In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.”

50 Lei No 13.123, de 20 de maio de 2015 (Brazil).

51 Patents Act 2013 (NZ), 2013/68, s 3.

52 See Decree-Law No 11/2013 of August 22, 2013, on the Protection of Cultural Heritage, 22 August 2013 (entered into force 1 March 2014) (China), online: <[www.wipo.int/wipolex/en/details.jsp?id=15171](http://www.wipo.int/wipolex/en/details.jsp?id=15171)>; The Protection of Traditional Knowledge and Cultural Expressions Act, 2016, Kenya Gazette Supplement No 154 (Acts No 33) (Kenya) [Kenyan Traditional Knowledge Bill]. Section 8(1) of the Kenyan bill directs county governments to “establish and maintain a register...relating to traditional knowledge and cultural expressions.” Critically, section 10(2) of the Kenyan bill permits communities to make their own rules governing the authorization for use of their traditional knowledge; B6-2016, Protection, Promotion, Development and Management of Indigenous Knowledge Systems Bill (S Afr), 2016 [Indigenous Knowledge Protection Bill]. The Swakopmund Protocol requires each member country to establish a “competent national authority” to administer the provisions of the treaty. See Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore within the Framework of the African Regional Intellectual Property Organization (ARIPO), 9 August 2010, s 3 (entered into force 11 May 2015).

53 See Margo A Bagley, “Illegal Designs? Enhancing Cultural and Genetic Resource Protection through Design Law” CIGI, CIGI Papers No 155, 5 December 2017 (describing 54 African nations’ “proposal to allow policy space in the draft [WIPO Design Law Treaty] for countries to be able to require design applicants to disclose the origin of traditional cultural expressions, traditional knowledge, and biological or genetic resources used in creating protectable designs” at 1).

54 See Nagoya Protocol, *supra* note 4, art 1 (describing provisions for access and benefit sharing).

55 See e.g. CBD, *supra* note 4; Nagoya Protocol, *supra* note 4; UNDRIP, *supra* note 4.

liberal view of the public domain.<sup>56</sup> But the binary tenor of the current public domain discourse in the context of traditional knowledge — one that effectively defines traditional knowledge *out* of entitlement-based protection by unduly expansive and ahistorical views of the public domain — risks obscuring distributional and justice issues of great significance to Indigenous communities.<sup>57</sup>

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## Public Domain Challenges in a Global Framework for the Protection of Traditional Knowledge

Beyond general statements highlighting the “protection of the public domain” as a concern, there has been little formal scrutiny of the relationship between the public domain and traditional knowledge in multilateral fora. References to the public domain in international negotiations, such as the WIPO IGC, appear to question, at the outset, whether traditional knowledge is not *inherently* part of a global public domain. The proposed definition of the public domain in a draft text from IGC 27 clearly displays this view by framing all “intangible materials that...are not or may not be protected by established intellectual property rights”<sup>58</sup> as resources in the public domain. In this frame, the public domain does not merely delimit a set of recognized entitlements; it also poses a challenge about whether bodies of knowledge produced by Indigenous groups are entitled to protection.

### Four Challenges of the Public Domain in IP Discourse

From the perspective of the resource holders, demands for rights-based protection in international law are not claims for *new* forms of property that imperil the set of policy concerns

represented by the public domain; rather, these entitlement-based claims represent efforts to define rights and interests that have long existed within culturally distinctive communities. To put it bluntly, developing countries and the communities whose resources are at issue seek to defend their *already existing* internally coherent legal, moral and equitable rights within a legally unassailable international framework.

To carve out meaningful space for a rights-based international framework for traditional knowledge, the undifferentiated notion of the public domain requires discipline. One way to impose such discipline is by addressing features of the conventional understanding of the public domain that pose particular challenges for the protection of traditional knowledge. Below are four of those challenges:

- The public domain generally describes a realm that comprises intellectual resources that are free for others to access, use and build upon. It has been notably described as the “opposite of property”<sup>59</sup> or “the ‘outside’ of intellectual property.”<sup>60</sup> No one owns the public domain, so the classic right of property to exclude is not usually associated with this realm.<sup>61</sup> Thus, if traditional knowledge is in the public domain, it cannot be the subject of entitlement-based protection.
- The notion that public domain resources are available to third parties at no cost stems from a conception that the public domain exists principally as a result of expired IP rights. This is the essence of the bargain underlying IP regimes: rights secure a reward for the creator but mandate a return to the public. At a minimum, skeptics of entitlement-like protection for traditional knowledge in the IGC and beyond seek a similar social bargain for any framework for the protection of traditional knowledge.<sup>62</sup>
- Indigenous groups and local communities desire to maintain cultural and spiritual identity (and, in some cases, a measure of control) with their knowledge systems and with the goods produced well after those

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56 See Munzer & Raustiala, *supra* note 3; Boyle, *supra* note 3.

57 See Chander & Sunder, *supra* note 3.

58 See WIPO, IGC, *The Protection of Traditional Knowledge: Draft Articles*, 27th Sess, WIPO/GRTKF/IC/27/REF/FACILITATORS DOCUMENT REV. 2 (2014) at 5 [IGC 27].

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59 Boyle, *supra* note 3.

60 *Ibid.*

61 *Ibid.*

62 Munzer & Raustiala, *supra* note 3.

goods have entered the global marketplace. The risk of disassociation posed by placing traditional knowledge in the public domain is a critical concern for these communities. The fact that works in the public domain are freely accessible encourages use (or overuse) that may accelerate processes of disassociation, desecration and, ultimately, dislocation.

- Finally, one of the most important functions of the public domain is to protect the basis of future innovation and creativity by excluding raw materials and building blocks of innovation and creativity from enclosure. Efforts since the 1980s through the conclusion of the CBD have largely addressed the controversy surrounding the so-called common heritage principle mentioned earlier, at least with respect to GRs.<sup>63</sup> But in the IP space, granting exclusive rights to control these resources and the traditional knowledge associated with them could adversely affect innovation and creativity, certainly in the agricultural sciences.<sup>64</sup> Moreover, as some scholars note, GRs may embody traditional knowledge applied over generations to improve genetic traits and/or biological functions of plants and animal life. The distinction between GRs and traditional knowledge (reflected in some international instruments) must thus be cautiously understood and applied.

In sum, these features of the public domain — its non-property status, its emphasis on (mostly) free access and use, its disassociation from communities that cultivated or produced the knowledge and, finally, the public domain's essential role in ensuring future innovation and creativity — are distinct challenges for Indigenous communities seeking to secure rights in traditional knowledge. But for each of these challenges, there are fairly strong rebuttals that point to the need for a distinctive public domain for traditional knowledge.

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## Toward a Custom-built Public Domain for Traditional Knowledge

Traditional knowledge does not simply exist in an untouched state of nature belonging to no one — *res nullius*. While some forms of traditional knowledge, such as GRs, are products of nature, they also reflect years of ingenuity and skill that have produced their current genetic makeup.<sup>65</sup> The substantial likelihood, discussed in the first section of this paper, that traditional knowledge assets could satisfy the eligibility criteria in IP subject areas affirms that these assets are not, as some might imply, like the air or like fish in the ocean: too diffuse for exclusive possession. Even if this were so, modern property law recognizes rights of sovereign states to claim ownership over resources such as the air (for example, capping air use in relation to pollution), and to pass environmental laws regulating certain kinds of fish stock in the ocean.<sup>66</sup> Extending these advances in property law to traditional knowledge and any associated resources therewith is hardly a huge legal leap.

### Traditional Knowledge Satisfies Existing IP Standards

Many manifestations of traditional knowledge (including traditional cultural expressions) already satisfy the requirements of existing IP regimes. For example, traditional knowledge-based arts, crafts, songs, performances, medicines or rituals undoubtedly satisfy copyright's minimum criteria for originality and, in some cases, fixation. The demands of Indigenous groups and local communities for perpetual association with their knowledge assets are no different from the perpetual association possible between a product or service and the indication of source

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63 See e.g. *Interpretation of the International Undertaking on Plant Genetic Resources*, UN Doc C89/24 (1989); see also CBD, *supra* note 4, art 15.

64 Halewood, *supra* note 10. Parties to the International Treaty on Plant Genetic Resources for Food and Agriculture already deal with this issue. The treaty creates a multilateral framework for global benefits sharing in order to facilitate access to plant GRs to aid in the development of sustainable agriculture across the globe. See *International Treaty on Plant Genetic Resources for Food and Agriculture*, 3 November 2001, art 18 (entered into force 29 June 2004).

65 Chidi Oguamanam, "Genetic Use Restriction (or Terminator) Technologies (GURTs) in Agricultural Biotechnology: The Limits of Technological Alternatives to Intellectual Property" (2005) *Can J L & Tech* 59; Chidi Oguamanam, "Farmers' Rights and the Intellectual Property Dynamic in Agriculture" in Matthew David & Deborah Halbert, eds, *The SAGE Handbook of Intellectual Property* (London, UK: SAGE Ltd., 2014).

66 Rose, "Expanding the Choices", *supra* note 24; Carol M Rose, "Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age" (2003) 66:1 *L & Contemp Probs* 89, 93–94 [Rose, "Romans"].

that trademark law protects.<sup>67</sup> Nor is it that much different from the desire of the French to limit use of “Champagne” to producers of sparkling alcoholic beverages from Champagne,<sup>68</sup> and the Italians’ desire to limit the use of “Parma” to producers of certain goods from Parma.<sup>69</sup> The Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications (as adopted on May 20, 2015)<sup>70</sup> is a regime that protects precisely this type of association on far less stringent criteria than trademarks, with the possibility of perpetual provenance.<sup>71</sup>

Limits on duration of traditional knowledge protections certainly are possible. The South African bill, for example, propounds a regime in which mandatory royalties for a particular user expire after 50 years of use for copyrightable works.<sup>72</sup> This law would require royalties for 20 years for traditional knowledge that is “scientific or technical” in nature.<sup>73</sup> Critically, these limits apply only to the individual licensee. Any person who wishes to utilize the traditional knowledge, no matter how far down the road, must pay for 20 years’ worth of royalties before their access becomes free.

## Traditional Knowledge May Be Partially Justified by Existing Theories of IP

The utilitarian logic of incentives ought to apply to claimants of traditional knowledge, too, if there is any expectation that property rights will lead them to continue to invest in their creative activities. This is particularly relevant because the twin forces of misappropriation and globalization continue to disrupt and undermine the capacity of many traditional systems to sustain plant and animal life. As the United Nations Education, Scientific and Cultural Organization (UNESCO) puts it: “Local communities...possess their own

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67 See Gervais, *supra* note 19.

68 See Hughes, *supra* note 19.

69 *Ibid.*

70 Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications (as adopted on May 20, 2015), 20 May 2015, LI/DC/19 (not yet entered into force) [Geneva Act of the Lisbon Agreement].

71 *Ibid.*, art 2.

72 *Indigenous Knowledge Protection Bill*, *supra* note 52, s 26(3)(b).

73 *Ibid.*, s 26(3)(a).

rich understandings about the natural milieu and their own interpretations about how it should be managed. When these are ignored by scientists and resource managers, efforts to conserve local ecosystems may falter and local livelihoods may be undermined.”<sup>74</sup>

## Traditional Knowledge Can Be Tied to Real Property

Traditional knowledge often is intimately connected to a depletable resource, namely, land. So far, assertions of the public domain in the international context have not at all addressed the intersectionality of tangible and intangible property interests that is a core feature of the traditional knowledge claims of Indigenous groups and communities. This intersectionality alone requires much more nuanced approaches to the idea of the public domain in the context of traditional knowledge. The influential justification for property rights grounded in concerns about waste and inefficiency, as elaborated by the tragedy of the commons,<sup>75</sup> have significant implications for traditional knowledge. Certainly, sustainability considerations permeate the Nagoya Protocol’s regime of access and benefit sharing.<sup>76</sup>

The risk of overuse or underinvestment in traditional knowledge requires the imposition of limits on access to the knowledge assets of Indigenous groups in the form of exclusive rights. Such limits fuel the angst underlying claims that traditional knowledge protection jeopardizes the public domain. Critically, however, public access and the exercise of certain attributes of private ownership are not fundamentally irreconcilable. Consider that in real property, public access to physical spaces that are especially valuable or vulnerable (for example, forests and rivers) are subject to fairly extensive regulation and oversight. Even if traditional knowledge is “by nature” open to all, as leading property scholar Carol Rose notes: “[T]he idea of [public goods] works hand in glove with a regime in which most resources are the subject of private property. Indeed, open public access would make little sense without an underlying regime of private property and

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74 See UNESCO, Bureau of Public Information, “Traditional Knowledge”, online: <[www.tigweb.org/action-tools/projects/download/12291.pdf](http://www.tigweb.org/action-tools/projects/download/12291.pdf)>.

75 Garrett Hardin, “The Tragedy of the Commons” (1968) 162:3859 *Science* 1243.

76 See CBD, *supra* note 4.

trade. The openness of trade routes presumes that the users of these routes have their own incentives to trade, and that those incentives come in large part from private ownership.<sup>77</sup>

The same could be said of Indigenous groups and local communities who have their own systems of incentives, governance and land management. These systems derive from, and rest upon, property rights and norms that are internal to the Indigenous group and local community, and that are reinforced by other legal regimes, including in international law.<sup>78</sup>

## An International Set of Norms for Traditional Knowledge and the Public Domain Is Attainable

Determining the precise scope of a tailored public domain and identifying an entity with both the legal and cultural authority to circumscribe it may seem insurmountable. However, the deference that instruments like the Nagoya Protocol afford to community standards suggests that rough consensus around a baseline is attainable.<sup>79</sup>

A customized public domain requires shared understanding of the economic and scientific value of traditional knowledge, and a rational theory for why that value should be available to communities beyond those that have invested in its cultivation or development. Moreover, the public domain of countries can, does and will continue to differ under all categories of IP law. This is the intentional design of the international IP system; it can similarly be the intentional rule for traditional knowledge holders, thus aiding the design of a system that considers elements of traditional knowledge systems and applications that merit access by third parties under prescribed conditions.

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## Possible Approaches to the Public Domain and the Protection of Traditional Knowledge

Competing visions of what principles should be included in a possible legal framework for traditional knowledge — at the national and multilateral levels — are inescapably embedded in assumptions about the nature and role of the public domain in the sense of what kind of knowledge should be precluded from enclosure. Certainly in the IGC, it is not always clear whether *demandeurs* are mainly opposed to *free* access to traditional knowledge, or whether the primary concern is the quintessentially human impulse for attribution and self-governance consistent with the distinctive values and interests of Indigenous communities. The public domain trope as currently deployed materially undermines both concerns.

On close examination, efforts to treat traditional knowledge as falling within one or all of the public domains of IP, whether happening in the IGC or in other fora, fall short. The public domain rhetoric and analogues are incomplete and imprecise. A monolithic conception of the public domain obscures the variegated ways in which property rights are constructed to achieve specific societal outcomes. Such a conception also is unworkable, given the design of global IP rights that knowingly accords significant discretion in national implementation. Clarifying the nature and scope of possible obligations as regards traditional knowledge thus could facilitate better approaches to managing the intersection between conventional IP rights and the various public domains.

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77 Rose, “Romans”, *supra* note 66 at 100.

78 For example, the UN Resolution on Permanent Sovereignty over Natural Resources makes clear that peoples and countries enjoy permanent sovereign authority over their natural resources, including the right to determine the rules and conditions for the “exploration, development and disposition” of these resources. See *Permanent Sovereignty over Natural Resources*, GA Res 1803 (XVII), UNGAOR, UN Doc A/RES/1803 (1962).

79 See Nagoya Protocol, *supra* note 4.

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## A Tiered Approach to Traditional Knowledge

In 2014, the idea of a tiered approach for the protection of traditional knowledge was formally introduced at the WIPO IGC discussions.<sup>80</sup> This approach sought to provide a structure for distinguishing categories of traditional knowledge and corresponding rights. The proposed tiers are roughly divided along various degrees of publicness — “secret traditional knowledge,” “sacred traditional knowledge,” “closely held traditional knowledge” and “widely diffused traditional knowledge.”<sup>81</sup>

Here, the author suggests some refinement of the tiered approach proposed in the IGC and briefly sketches the suggested scope for each tier:

- The highest tier, “secret or sacred (or both) traditional knowledge,” would effectively be afforded the same protections as trade secrets, including injunctive relief against unauthorized disclosure. This tier would be entitled to both economic and moral rights, consistent with hybrid formulations of principles of trade secret, patent and unfair competition law.
- The second tier, “closely held traditional knowledge,” would be that which is maintained by subgroups (for example, tribal elders), which may permit some access, but is still highly integrated into the cultural heritage of Indigenous peoples. This knowledge would be afforded similar protections to secret traditional knowledge, as both its degree of dissemination and integral cultural nature are comparable. Economic and moral rights would be available to holders of this type of traditional knowledge.
- The third tier, “widely disseminated traditional knowledge,” would be afforded only the rights of attribution. An example of this could be yoga. Yoga is widely known to be associated with India, but its dissemination and gradual, albeit incomplete, disconnect from Indian cultural identity make the full panacea of IP rights both impracticable and unjustifiable. Attribution,

however, is still justified, as the source of the traditional knowledge can still be identified.

It is certainly possible that some economic rights could be afforded at, or within, this level. GIs are an example of an existing legal regime that fits into this category. Examples of GIs that would qualify as widely dispersed under this tier might include curry (India), Idaho potatoes (United States), feta cheese (Greece) and basmati rice (India).<sup>82</sup> Traditional knowledge that could fall into this category include boomerangs (Australia), piñatas (Mexico) and Kente cloth (Ghana). In each of these examples, national laws may provide economic rights, but in an international framework, rights of attribution are more practicable and plausible.

- To address the difficulty of just how widespread traditional knowledge can be to still qualify for some measure of protection, a final tier for “generic traditional knowledge” could be helpful. Generic traditional knowledge should be afforded no rights. Like the third tier, this category of traditional knowledge is widely disseminated, but a key difference is that it fails to identify a specific source/Indigenous group or local community. This dislocation from source may be compounded by the presence of the traditional knowledge in many other geographical locations or among numerous other communities. An example of this is knowledge regarding extraction and use of quinine from the cinchona tree to treat malarial fever,<sup>83</sup> which was once associated with an Indigenous group in South America. There could be some quibbling about how many other Indigenous groups or communities have the same knowledge, but the central idea should be uncontroversial: knowledge (including processes) that is so well known and/or practised among multiple groups and across many jurisdictions should be treated as “generic.” Another example of generic traditional knowledge could be the art or process of body tattooing which, while differentiable across cultures, is sufficiently widespread as to be incapable of belonging to a single group today.

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80 IGC 27, *supra* note 58 at paras 97, 226.

81 *Ibid*, art 3.

82 Many of these GIs are protected by the Geneva Act of the Lisbon Agreement, *supra* note 70.

83 Jane Achan et al, “Quinine, an old anti-malarial drug in a modern world: role in the treatment of malaria” (2011) 10 *Malaria J* 144.

In both these examples, there is no current distinctive association or cultural nexus to a discrete Indigenous group. The knowledge is generic and arguably falls within the public domain — both in traditional knowledge writ large and in the IP sense of the term. Such “genericide” resembles modern trademark law in which protection is forfeited when a trademark no longer represents source but, instead, denotes a genus.

In short, the tiered approach, if taken seriously, would produce a body of information ill-suited for any of the first three categories, and as such, belongs to the public domain. Policing the boundaries of the tiers will be an important aspect of generating a legitimate public domain for traditional knowledge.

Finally, a custom-built public domain would further benefit from two structural moves in any negotiation in which legal protection for traditional knowledge is the stated objective:

## Utilize L&Es

In the IP space, limitations such as fair use, freedom of speech or reverse engineering yield positive externalities.<sup>84</sup> These externalities also serve as justifications for the public domain, but they do so without impairing the claim to property status.<sup>85</sup> A similar structural move could be beneficial for traditional knowledge. An ideal locus of arguments favouring unauthorized and uncompensated access to traditional knowledge should not be the definitional exercises that invoke the public domain as a way to resist the property claims of Indigenous groups and local communities. Instead, such arguments may fare better in negotiations over L&Es to traditional knowledge. However, any such L&E should be defined and, ideally, exercised with the involvement of the Indigenous peoples affected.

Institutional arrangements that empower Indigenous peoples in delimiting norms for access to traditional knowledge are vital to the success of any traditional knowledge regime. Moving the public domain discussion to consideration of appropriate L&Es makes clear that parties seek to create boundaries that enhance utilization of traditional knowledge to improve human

welfare. Appropriately constructed L&Es for traditional knowledge, in particular those framed as standards that allow domestic institutions and Indigenous groups to focus on the purpose for the access and the nature of use by third parties, may work better to align the rights of Indigenous groups and local communities with legitimate global welfare considerations. Nations should be hesitant, however, to create L&Es that may significantly disempower or compromise the governance rights of Indigenous communities.<sup>86</sup>

Strong proponents of traditional knowledge might argue that addressing the question of access to traditional knowledge is inappropriate in an international framework intended to ensure resource holders have effective rights of control. However, no system of entitlement-like protection is absolute. Property rights exist in some considerable tension: one person’s property right in inventions for genetically modified organism (GMO) seeds could interfere (and has interfered) with the property rights of farmers to grow their crops without fear of being contaminated by GMO seeds.<sup>87</sup> A copyright owner’s rights in literary and artistic works can conflict with the privacy or free speech interests of others.<sup>88</sup> In seeking entitlement-like protection, Indigenous groups and local communities must confront the reality that their property rights will be subject to limits. L&Es offer a workable normative space conducive to both entitlement rights and valid welfare considerations that may extend beyond the boundaries of the Indigenous group and local community.

## Affirm the Territoriality of the Public Domain

Currently in the WIPO IGC, asserting the public domain appears to be principally about protecting *existing* beneficiaries of the IP system, and doing so in a way that undermines creativity and innovation in local communities and among

84 See David Lange, “Recognizing the Public Domain” (1981) 44 *Law & Contemp Probs* 147.

85 See Boyle, *supra* note 3.

86 See *Kenyan Traditional Knowledge Bill*, *supra* note 52, s 12 (permitting a compulsory licence of traditional knowledge “[w]here protected traditional knowledge is not being sufficiently exploited by the owner.”) The bill requires prior informed consent from the Indigenous community, but it strains credulity to suggest that a community would both refuse to grant licences and provide consent for a compulsory licence.

87 See *Monsanto Canada Inc v Schmeiser*, [2004] 1 SCR 902; *Organic Seed Growers & Trade Ass’n v Monsanto Co*, 718 F (3d) 1350 (Fed Cir 2013).

88 See David L Lange & H Jefferson Powell, *No Law: Intellectual Property in the Image of an Absolute First Amendment* (Palo Alto, CA: Stanford University Press, 2008).

Indigenous peoples. But protection for traditional knowledge is not entirely, or even mostly, about the right to exclude others from use of knowledge goods. The claims of Indigenous groups and local communities address a more fundamental concern — one that turns directly on the question of whose sovereign prerogative it is to define the terms and conditions under which creative activity flourishes within specific territories and cultures. Notably, UNDRIP and the Nagoya Protocol appear to have answered this specific question in favour of the Indigenous groups.<sup>89</sup> These international instruments also obligate states to meaningfully implement the rights granted. For example, article 31(2) of UNDRIP requires states to “take effective measures to recognize and protect the exercise of” rights in traditional knowledge.<sup>90</sup>

As observed earlier, the public domain is first and foremost a national construct. A definition of the public domain in an international instrument may have political or ideological import, but it will yield little practical value. A better approach is to acknowledge the importance of a public domain and to acknowledge that limits to traditional knowledge rights must be carefully circumscribed to advance clearly exceptional national goals. In this regard, a three-step test formulation appropriately modified for traditional knowledge might be a useful starting point.<sup>91</sup> National laws could then further prescribe L&Es to traditional knowledge rights, including whether the exercise of limitations might jeopardize the balance between traditional knowledge protection and its stylized public domain as determined by Indigenous groups and local communities.

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## Conclusion

Knowledge goods and the processes that create them are unequivocally culturally contingent, whether that culture belongs to a firm, an academic discipline or an Indigenous group. Taking creative content from the legislatively defined public domain of one jurisdiction to re-appropriate it in another, arguably, is the outcome of territorially contingent IP rights. But it is also the consequence of specific policy choices made by sovereigns to ensure property rights serve endogenous welfare interests. Accordingly, the rhetoric of the public domain is most often deployed as a defence against expansive IP rights.

It might appear that asserting the public domain in the context of traditional knowledge is consistent with creativity and innovation; certainly not ineluctably. Deploying the construct of the public domain to constrain the capacity of Indigenous groups to govern their knowledge, practices and cultural goods vital to the identity and sustainability of their community is consistent with neither the justifications for IP (including its various public domains), nor the global public interest. Such an approach to the public domain undermines the weight of national laws that protect traditional knowledge. It also delegitimizes the role of the public domain as an important feature of the equitable design of a continuously evolving global innovation system.

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<sup>89</sup> See Nagoya Protocol, *supra* note 4; UNDRIP, *supra* note 4.

<sup>90</sup> UNDRIP, *supra* note 4, art 31(2). See also *Nagoya Protocol*, *supra* note 4, art 12.

<sup>91</sup> There are several variations of the three-step test. See e.g. *Berne Convention*, *supra* note 43, art 9(2); *TRIPS Agreement*, *supra* note 5, art 13; *WIPO Copyright Treaty*, 20 December 1996, arts 10(1), 10(2) (entered into force 6 March 2002).

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