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Intellectual Property Geographies

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☞ Developing countries; Digital technology; Geographic areas; Indigenous peoples; Intellectual property; Territory; TRIPs

Introduction

Although geography—and the need to establish new and distant markets—has influenced the development of international intellectual property law and policy from the very beginning,¹ the linkage between intellectual property and geography has not received much attention from policy makers and academic commentators. Nevertheless, geographically related issues abound in today’s intellectual property field. These issues include the protection of geographical indications, traditional knowledge and traditional cultural expressions; the discussions on intellectual property and climate change; the development of high-technology innovation clusters; the negotiation of regional trade agreements; the challenges posed by cloud-based platforms and transnational distribution; the use of geolocation tools and the mining of data involved in Global Positioning System (GPS) navigation.

There are also many promising developments in the field of geography that suggest an appropriate time to bring spatial analysis and geographical insights into the intellectual property field. For example, the best-selling works of Jared Diamond, most notably his Pulitzer Prize-winning *Guns, Germs, and Steel*, have received considerable attention among the popular audience.² Another *New York Times* bestseller, Robert Kaplan’s *The Revenge of Geography*, uses maps (literally) and geopolitical insights to shed light on the global conflicts lying ahead of us.³ In addition, Nobel Laureate Paul Krugman has pioneered research on what he coined “new economic geography,” which brings together geography and international trade.⁴ For more than a decade, Nicholas Blomley, David Delaney and their colleagues have worked tirelessly to develop the field of critical legal geography.⁵ One can also find additional scholarly literature exploring issues at the intersection of law and geography.⁶

* Copyright © 2014 Peter K. Yu. This article draws on research from the author’s earlier works in the *Cardozo Arts and Entertainment Law Journal*, the *Michigan State Law Review*, the *Temple Law Review*, and a book chapter forthcoming from Edward Elgar Publishing. An earlier version of the article was presented at the “Intellectual Property and Geography” Panel at the 16th Annual Meeting of the Association for the Study of Law, Culture and the Humanities at Birkbeck, University of London. The author is grateful to the participants of this event for their valuable comments and suggestions.

¹ Paul Edward Geller, “Copyright History and the Future: What’s Culture Got to Do with It?” (2000) 47 J. Copyright Soc’y U.S.A. 209, 229.

² Jared M. Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: W.W. Norton, 1998).

³ Robert D. Kaplan, *The Revenge of Geography: What the Map Tells Us about Coming Conflicts and the Battle against Fate* (New York: Random House, 2012).

⁴ Paul Krugman, “Where in the World Is the ‘New Economic Geography’?” in Gordon L. Clark, Maryann P. Feldman and Meric S. Gertler (eds), *The Oxford Handbook of Economic Geography* (Oxford: Oxford University Press, 2000).

⁵ e.g. Nicholas K. Blomley, *Law, Space, and the Geographies of Power* (New York: Guilford Press, 1994); Nicholas K. Blomley, David Delaney and Richard T. Ford, *The Legal Geographies Reader: Law, Power, and Space* (Oxford: Blackwell Publishers, 2001); Irus Braverman, Nicholas K. Blomley, David Delaney and Alexandre Kedar (eds), *The Expanding Spaces of Law: A Timely Legal Geography* (Stanford: Stanford University Press, 2014); David Delaney, *Race, Place, and the Law, 1836–1948* (Austin: University of Texas Press, 1998); David Delaney, *The Spatial, the Legal and the Pragmatics of World-Making: Nomospheric Investigations* (New York: Routledge, 2010).

⁶ e.g. Lauren A. Benton, *A Search for Sovereignty: Law and Geography in European Empires, 1400–1900* (Cambridge: Cambridge University Press, 2010); Jane Holder and Carolyn Harrison (eds), *Law and Geography* (Oxford: Oxford University Press, 2003); William M. Taylor (ed.), *The Geography of Law: Landscape, Identity and Regulation* (Oxford: Hart Publishing, 2006); Franz von Benda-Beckmann, Keebet von Benda-Beckmann and Anne M.O. Griffiths (eds), *Spatializing Law: An Anthropological Geography of Law in Society* (Burlington: Ashgate, 2009).

Even in the intellectual property field, discussions on intellectual property and geography have slowly emerged. For instance, in September 2010, the International Society for the History and Theory of Intellectual Property (ISHTIP) titled its second workshop “Geographies of Intellectual Property”. In March 2013, the Annual Meeting of the Association for the Study of Law, Culture and the Humanities included a panel on “Intellectual Property and Geography”. In addition, intellectual property literature is filled with occasional works linking intellectual property to geography, including the pioneering works of the late Keith Aoki and Rosemary Coombe.⁷ Since the mid-1990s, a growing volume of works on geography and cyberlaw has also surfaced.⁸

If one goes back further to the origin of the international intellectual property system, one cannot help but notice the geographical scope of the Paris Convention for the Protection of Industrial Property and the Berne Convention for the Protection of Literary and Artistic Works. Because these two cornerstone treaties were established by European colonial powers, with limited participation from other less powerful countries or then dependent territories, the regime was largely Euro-centric.

Even more importantly, those parts of the world that did not have a voice at the early stages of this regime are usually rich in biological diversity and traditional culture. As a result, the current debate on genetic resources, traditional knowledge and traditional cultural expressions has not only been coloured by problems created by colonisation and an inequitable international intellectual property regime, but also the inevitable relationship between intellectual property and geography. Similar connections can be found in the debate on intellectual property and climate change, which highlights the developing countries’ struggle with hurricanes, typhoons, tsunamis, severe droughts, desertification and forest decay.

Since its inception, *The WIPO Journal* has devoted the first issue of each volume to a major discipline. The goal of this unique approach is to emphasise the inter- and multi-disciplinary nature of the study of intellectual property. Together, these special issues have demonstrated that intellectual property is not just about law and policy, but also has ramifications for many other disciplines. Thus far, we have explored intellectual property’s connections to law and policy, economics, politics, culture and history. This issue will continue this approach by exploring the linkage between intellectual property and geography.

As an introduction to this special issue, this article will outline three sets of mismatches that demonstrate the vitality, utility and richness of analysing intellectual property developments through a geographical lens. The article begins by examining economic geography, focusing on the tensions and conflicts between territorial borders and sub-national innovation. It then examines the oft-found mismatch between political geography and cultural geography. Illustrating this mismatch is the challenge of protecting traditional knowledge and traditional cultural expressions. This article concludes by exploring the growing mismatch between legal geography and human geography. It discusses issues ranging from the region codes deployed to protect DVDs to the increasing consumer demand for cross-border portability of media content.

Economic geography: Territorial borders and sub-national innovation

The first set of mismatches concerns economic geography. It explores the tension between territorial borders based on the nation-state concept and innovation and industrial production at the sub-national level. As I noted in recent articles, one of the major challenges concerning large developing countries is the rapidly growing gap between economically and technologically developed regions and their less developed counterparts.⁹ While it is nothing new to have highly uneven development in developing

⁷ e.g. Keith Aoki, “(Intellectual) Property and Sovereignty: Notes toward a Cultural Geography of Authorship” (1996) 48 *Stan. L. Rev.* 1293; Rosemary J. Coombe, “Authorial Cartographies: Mapping Proprietary Borders in a Less-than-Brave New World” (1996) 48 *Stan. L. Rev.* 1357.

⁸ e.g. Julie E. Cohen, “Cyberspace as / and Space” (2007) 107 *Colum. L. Rev.* 210; David R. Johnson and David G. Post, “Law and Borders—The Rise of Law in Cyberspace” (1996) 48 *Stan. L. Rev.* 1367; Lawrence Lessig, “Zones of Cyberspace” (1996) 48 *Stan. L. Rev.* 1403.

⁹ Peter K. Yu, “Intellectual Property and Asian Values” (2012) 16 *Marq. Intell. Prop. L. Rev.* 329, 395–396; Peter K. Yu, “The Middle Intellectual Property Powers” in Randall Peerenboom and Tom Ginsburg (eds), *Law and Development in Middle-Income Countries: Avoiding the Middle-Income Trap* (Cambridge: Cambridge University Press, 2014), pp.98–99.

countries, such uneven development could pose a serious challenge to the existing intellectual property system—both domestic and international alike.

Since the adoption of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) in the World Trade Organization (WTO) in 1994, international intellectual property literature has been filled with critiques of the “one size fits all”—or, more precisely, “super size fits all”—approach to intellectual property norm-setting. Yet these critiques tend to end at national borders, with the trust and expectation that sovereign governments will ultimately strike the appropriate balance for their own countries. Few, if any, articles or book chapters have problematised the “one size fits all” approach to intellectual property norm-setting within an individual country.

Nevertheless, when one adjusts the scale of the map to zoom in on the economic and technological developments in large developing countries, one cannot help but notice the alarming unevenness of these developments. Take China for an example. The economic and technological developments in its major cities and coastal regions far exceed those in the inner and rural areas.¹⁰ Based on the 2013 figures on invention patents provided by the State Intellectual Property Office in China, Jiangsu, Guangdong and Shandong provinces—the three provinces with the largest volumes of applications—had a total of 141,259, 68,990 and 67,642, respectively.¹¹ Meanwhile, Yunnan, Jiangxi and Gansu provinces had a total of only 3,961, 3,931 and 3,735, respectively. The latter figures were about one-twentieth of the figure in Guangdong or Shandong province and one-fortieth of the figure in Jiangsu province. If one includes Xinjiang, Inner Mongolia, Ningxia, Hainan, Qinghai and Tibet provinces in the latter group, the contrast between the statistics in the two groups becomes even more disturbing.

From the standpoint of intellectual property development, having highly uneven sub-national development could create major challenges for policy makers, especially in relation to the establishment of a national intellectual property strategy, which the State Council launched in June 2008. If the leaders seek to tailor protection to the divergent economic and technological conditions in different regions, they likely will have to come up with a “schizophrenic” nationwide intellectual property policy.¹² Under such a policy, protection will be tighter in the fast-growing and technologically proficient regions, but much weaker in their less developed counterparts.

By contrast, if the leaders do not seek to tailor protection to these divergent conditions, and instead accept uniform countrywide standards, they will have to develop a system that is either too strong or too weak for some regions. Or worse, they will have to adopt a system that is unsuitable for all regions—for example, when the system grants only mid-level protection that would be too low for the fast-growing regions but too high for the less developed regions.

To be certain, such a strategy could still generate net economic gains for the country, especially when the strategy is carefully designed and implemented. Nevertheless, these gains will not be fairly distributed unless a well-functioning transfer mechanism already exists to allow the anticipated winners to share the new benefits with the potential losers. As Frederick Abbott reminded us in relation to cross-sectoral bargains made in bilateral and regional trade agreements:

“The problem with ... using net economic gains or losses as the developing country benchmark is that gains for a developing country’s textile or agricultural producers do not directly translate into higher public or private health expenditures. Salaries for part of the workforce may increase and government tax revenues may rise, and this may indirectly help offset pharmaceutical price increases. However, in order for the health sector not to be adversely affected, there must be some form of transfer payment, whether in the form of increased public health expenditures on pharmaceuticals,

¹⁰ Peter K. Yu, “Intellectual Property, Economic Development, and the China Puzzle” in Daniel J. Gervais (ed.), *Intellectual Property, Trade and Development: Strategies to Optimize Economic Development in a TRIPS Plus Era* (Oxford: Oxford University Press, 2007), p.203.

¹¹ State Intellectual Property Office, “Table 2 Distribution of Applications for Inventions Received from Home 2013”, available at http://english.sipo.gov.cn/statistics/2013/12/201402/t20140217_905142.html [Accessed December 3, 2014].

¹² Peter K. Yu, “International Enclosure, the Regime Complex, and Intellectual Property Schizophrenia” [2007] Mich. St. L. Rev. 1, 25–26.

by providing health insurance benefits, or other affirmative acts. In a world of economic scarcity, the prospect that governments will act to offset increases in medicines prices with increased public health expenditures is uncertain.”¹³

Although Professor Abbott’s insight focuses on the gains made across different economic sectors, the same argument could be made in relation to the gains secured across different geographical regions. Indeed, unless the central government is willing to step in to transfer benefits from the anticipated winners to the potential losers, those regions that have unsuitable levels of intellectual property protection are likely to remain losers in the system. As time goes by, the gap between the developed and less developed regions can only expand.

Disturbingly, uneven sub-national development is not limited to China; it can be found in many similarly situated countries, which range from India to Indonesia and from Bangladesh to Brazil. As Fareed Zakaria reminded us,

“India might have several Silicon Valleys, but it also has three Nigerias within it—that is, more than 300 million people living on less than a dollar a day. It is home to 40 percent of the world’s poor and has the world’s second-largest HIV-positive population.”¹⁴

Nobel Laureate Michael Spence also wrote about the “dual economy” in Brazil, which consists of

“a relatively rich one whose growth is constrained by the normal forces that constrain the growth of relatively advanced economies, and a poor one where the early-stage growth dynamics ... just didn’t start, owing to its separation from the modern domestic economy and the global economy”.¹⁵

Even in the developed world, uneven economic and technological developments at the sub-national level are quite common. As Annalisa Primi reminded us in an essay published in the report on the 2013 Global Innovation Index:

“In the USA and in Germany, the top R&D investing regions—California and Baden-Württemberg—account, respectively, for 21% and 25% of total country investments in R&D. In Finland and the Republic of Korea, the top regions—Etelä-Suomi and the Korean Capital Region—account for 55% and 63% of total R&D expenditures.”¹⁶

At the global level, “[t]he top 20 patenting regions account for more than 50% of total world patent applications”.¹⁷ Nine of these regions are in the United States, four in Japan, three in Germany, one each in France and the Netherlands, and, of course, none in the developing world. According to Primi:

“The geography of innovation is not flat. Certain places, weather regions, cities, or local clusters tend to agglomerate specific competences, including scientific and technical knowledge as well as entrepreneurial capabilities and finance; these stand out as the world’s top innovation hotspots.”¹⁸

Her observations dovetail with the growing volume of research on the development of high-technology innovation clusters,¹⁹ which range from the pioneering research of Alfred Marshall²⁰ to the widely cited

¹³ Frederick M. Abbott, “The Cycle of Action and Reaction: Developments and Trends in Intellectual Property and Health” in Pedro Roffé, Geoff Tansey and David Vivas-Eugui (eds), *Negotiating Health: Intellectual Property and Access to Medicines* (London: Earthscan, 2006), p.33.

¹⁴ Fareed Zakaria, *The Post-American World* (New York: W.W. Norton, 2008), p.133.

¹⁵ Michael Spence, *The Next Convergence: The Future of Economic Growth in a Multispeed World* (New York: Farrar, Straus and Giroux, 2011), p.204.

¹⁶ Annalisa Primi, “The Evolving Geography of Innovation: A Territorial Perspective” in *The Global Innovation Index 2013: The Local Dynamics of Innovation* (Geneva: World Intellectual Property Organization, 2013), p.70.

¹⁷ Primi, “The Evolving Geography of Innovation” in *The Global Innovation Index 2013* (2013), p.70.

¹⁸ Primi, “The Evolving Geography of Innovation” in *The Global Innovation Index 2013* (2013), p.70.

¹⁹ e.g. Charlie Karlsson (ed.), *Handbook of Research on Innovation and Clusters: Cases and Policies* (Cheltenham: Edward Elgar Publishing, 2008).

²⁰ Alfred Marshall, *Principles of Economics: An Introductory Volume* (New York: Macmillan, 1948).

research of Michael Porter.²¹ Although discussions of innovation clusters in the United States tend to focus on Silicon Valley and Route 128,²² clusters can be found in many other different sectors, such as carpet producers around Dalton, Georgia, jewellery producers around Providence, Rhode Island, financial services in New York, the old shoe industry in Massachusetts and the rubber industry in Akron, Ohio.²³

Indeed, as Professor Krugman concisely noted in the early 1990s, “economic regions do not respect state boundaries”.²⁴ As he continued:

“Only a few years ago it was common for economic analyses of increasing returns and trade to assume that external economies applied at the level of a nation and to assert as their main result that big countries tend to export goods characterized by economies of scale. The result may still be true—but it will be true because national policies make it so, not because there is anything of inherent economic importance in drawing a line on the ground and calling the land on either side two different countries.

All of which leads us to the real reason why national boundaries matter and to the proper notion of a nation for our analysis. Nations matter—they exist in a modeling sense—because they have governments, whose policies affect the movements of goods and factors. In particular, national boundaries often act as barriers to trade and factor mobility. Every modern nation has restrictions on labor mobility. Many nations place restrictions on the movement of capital, or at least threaten to do so. And actual or potential limits on trade are pervasive, in spite of the best efforts of trade negotiators.”²⁵

Thus, even though critiques of the “one size fits all” approach to intellectual property norm-setting tends to stop at national borders, due in large part to the general respect for national sovereignty, it is important to develop a deeper appreciation of the mismatch between state-based territorial borders and economic and technological developments at the sub-national level. Such appreciation would lead us to rethink our design of both the domestic and international intellectual property systems. It would also compel us to question whether countries should have the same level of protection throughout, especially when some regions are clearly more economically and technologically developed than the others.

At first glance, a proposal calling for the development of differentiated intellectual property standards at the sub-national level is likely to raise concerns about potential inconsistencies with the TRIPS Agreement. As much as policy makers and academic commentators have noted how globalisation, trade liberalisation and regional agreements have weakened the nation-state concept, that concept still remains the foundation of the WTO system. Except for the three customs territories—namely, Chinese Taipei, Hong Kong and Macao—all the other 150-plus WTO members are nation-states.

Furthermore, article 27.1 of the TRIPS Agreement states that

“patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced”.

Although most of the discussions on this provision have focused on either discrimination based on the field of technology or the distinction between product and process patents, this provision includes an express prohibition against discrimination based on “the place of invention”.

Upon reflection, however, the analysis is likely to be less straightforward, especially when the region-based differentiated arrangements respect national treatment—that is, when they do not discriminate against foreign patent holders. Indeed, one could offer three arguably strong arguments to support greater

²¹ Michael E. Porter, *The Competitive Advantage of Nations* (New York: Free Press, 1990); Michael E. Porter, *On Competition* (Boston: Harvard Business School Publishing, 1998).

²² AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Cambridge, MA: Harvard University Press, 1994).

²³ Paul R. Krugman, *Geography and Trade* (Cambridge, MA: MIT Press, 1991), p.53.

²⁴ Krugman, *Geography and Trade* (1991), p.57.

²⁵ Krugman, *Geography and Trade* (1991), pp.71–72.

tailoring of intellectual property standards to the divergent economic and technological conditions at the sub-national level.

First, if the proposed arrangements offer the same protection to all inventions within the region, regardless of “the place of invention, the field of technology and whether products are imported or locally produced”, they should not present any art.27.1 problem. Moreover, the WTO panel made clear in *Canada—Patent Protection of Pharmaceutical Products* that “differentiation” does not always amount to “discrimination”. As the panel observed:

“The primary TRIPS provisions that deal with discrimination, such as the national treatment and most-favoured-nation provisions of Articles 3 and 4, do not use the term ‘discrimination’. They speak in more precise terms. The ordinary meaning of the word ‘discriminate’ is potentially broader than these more specific definitions. It certainly extends beyond the concept of differential treatment. It is a normative term, pejorative in connotation, referring to results of the unjustified imposition of differentially disadvantageous treatment.”²⁶

During the panel process concerning this dispute, the United States made a third party intervention stating that “differential treatment did not necessarily mean discriminatory treatment because different technologies might require different treatment to restore ‘parity of enjoyment’”.²⁷ Cited as support for its position is the technology-specific Bolar exception, which already existed during the TRIPS negotiations and applied to only pharmaceuticals and, later, medical devices. Similarly, Australia, another third party intervener, “stated that differential treatment did not necessarily amount to discrimination, and ... cited patent term extension as a means of ‘restoring the balance of interests’”.²⁸

Secondly, although countries tend to have national standards on the books, many seem to have in place varying levels of protection throughout the country. In the United States, for example, courts in different appellate circuits continue to disagree over the protection of intellectual property rights. A case in point is the protection offered by national trademark and unfair competition laws. Although the standards may be the same on paper—that is, based on the Federal Lanham Act—they differ at times in reality, not to mention the different levels of protection offered by state unfair competition laws.

Finally, there is a growing trend for developing countries to establish “free trade zones”, “customs free zones” or “export processing free zones”. These free zones tend to offer “relaxed regulations, limited taxes[,] ... reduced oversight ... [and] softened Customs control”—features that are different from those in other parts of the country.²⁹ Although intellectual property industries remain concerned about the problem of piracy and counterfeiting brought about by these free zones and sought to push for higher standards in the Anti-Counterfeiting Trade Agreement, the existence of these free zones within the WTO framework does suggest that WTO rules may allow for differentiation in limited circumstances.

This article does not allow me to fully explore these three arguments, which admittedly are tentative by nature. Yet the discussion here invites us to think more deeply about the possibility of designing the intellectual property system in a way that better responds to the uneven economic and technological developments within a country. More importantly, because this type of uneven development is found more often in large developing countries than in their developed counterparts, it is very likely that new innovative solutions will come from the former, rather than the latter.³⁰ Having solutions emerging from these countries is both exciting and refreshing. After all, the transplant of intellectual property standards tends to go from developed to developing countries.

²⁶ “Canada—Patent Protection of Pharmaceutical Products”, Report of the Panel, March 17, 2000, WT/DS114/R, para.7.94.

²⁷ “Canada—Patent Protection of Pharmaceutical Products”, Report of the Panel, 2000, para.4.36.

²⁸ “Canada—Patent Protection of Pharmaceutical Products”, Report of the Panel, 2000, para.4.36.

²⁹ Business Action to Stop Counterfeiting and Piracy, *Controlling the Zone: Balancing Facilitation and Control to Combat Illicit Trade in the World's Free Trade Zones* (Paris, 2013), p.1.

³⁰ Yu, “Intellectual Property and Asian Values” (2012) 16 Marq. Intell. Prop. L. Rev. 329, 396.

Political and cultural geography

The second set of mismatches occurs between political geography and cultural geography. An instructive example concerns the challenge of protecting traditional knowledge and traditional cultural expressions developed by indigenous communities, a hot topic that has been explored for more than a decade and a half by the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) of the World Intellectual Property Organization (WIPO). Established in September 2000, the IGC sought to explore

“the development of an international legal instrument or instruments for the effective protection of traditional cultural expressions and traditional knowledge, and to address the intellectual property aspects of access to and benefit-sharing in genetic resources”.³¹

In the area of traditional knowledge and traditional cultural expressions, one tricky question concerns who would be in the best position to decide what materials to protect and how they should be protected. Although this question was once hotly debated, today’s prevailing view—and, most definitely, the politically correct view—is that traditional communities should decide for themselves. As Erica-Irene Daes, the Special Rapporteur of the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities and the chairperson of its Working Group on Indigenous Populations, explained:

“Indigenous peoples have always had their own laws and procedures for protecting their heritage and for determining when and with whom their heritage can be shared. The rules can be complex and they vary greatly among different indigenous peoples. To describe these rules thoroughly would be an almost impossible task; in any case, each indigenous people must remain free to interpret its own system of laws, as it understands them.”³²

Likewise, Angela Riley observed,

“for a tribe, determining the destiny of collective property, particularly that which is sacred and intended solely for use and practice within the collective, is a crucial element of self-determination”.³³

Rebecca Tsosie also found indigenous self-determination “best served through an intercultural framework that acknowledges the autonomy rights of native peoples”.³⁴

It is indeed no surprise that art.3 of the United Nations Declaration on the Rights of Indigenous Peoples declares: “Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development”. Article 11(1) further provides:

“Indigenous peoples have the right to practise 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 archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.”

In addition, art.31(1) states:

³¹ WIPO, “Traditional Knowledge”, available at <http://www.wipo.int/tk/en/> [Accessed December 3, 2014].

³² Erica-Irene Daes, “Discrimination against Indigenous Peoples: Study on the Protection of the Cultural and Intellectual Property of Indigenous Peoples”, July 28, 1993, U.N. Doc. E/CN.4/Sub.2/1993/28, para.27.

³³ Angela R. Riley, “Recovering Collectivity: Group Rights to Intellectual Property in Indigenous Communities” (2000) 18 *Cardozo Arts & Ent. L.J.* 175, 204–205.

³⁴ Rebecca Tsosie, “International Trade in Indigenous Cultural Heritage: An Argument for Indigenous Governance of Cultural Property” in Christoph Beat Graber, Karolina Kuprecht and Jessica C. Lai (eds), *International Trade in Indigenous Cultural Heritage: Legal and Policy Issues* (Cheltenham: Edward Elgar Publishing, 2012), p.236.

“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 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.”

Nevertheless, even if we assume that indigenous communities should decide for themselves what to protect and how to protect, difficult questions could arise when more than one indigenous community is involved in a dispute. To begin with, due to reasons ranging from past colonial efforts to civil wars to natural calamities, territorial borders do not always match cultural geography. The former colonies in Africa provide the most notorious examples. As Harm de Blij observed:

“To facilitate acquisition [of these colonies, European colonial powers] drew their boundaries point-to-point, often along parallels and meridians, and not just across deserts, as witness the United States–Canadian border west of the Great Lakes”.³⁵

Another oft-cited example in North America concerns the Iroquois (Haudenosaunee), whose members “live in two countries, the United States and Canada, due to an historical division of territory in which the Iroquois had no voice”.³⁶

Even when one ignores involuntary actions, voluntary actions could cause an indigenous community to split into two or more groups along geographical lines. For example, there could be “family feuds” within a community—such as when the youngsters disagreed with their elders.³⁷ (The reverse situation—where the elders disagreed with the youngsters—happens often and is generally not as important, because tribal law tends to grant decision-making power to the elders).³⁸ There could also be internal disagreement within a community, in which the majority prevails over the minority, or vice versa.

To complicate matters, there could be more than one indigenous community within a geographical region. There is a tendency for us to focus on the binary between indigenous and non-indigenous communities, assuming that the former speak with a singular voice. However, this is far from the truth. As Professor Riley reminded us:

“Although many indigenous creations follow the pattern of oral, inter-generational works, this is not the only model. Many tribes may, in fact, recognize property interests that are considered to be more reflective of a ‘Western’ view than an ‘indigenous one.’ The ways in which indigenous peoples characterize and define property are as varied as the peoples themselves, and Westerners must resist the urge to narrow and define the ‘indigenous perspective.’”³⁹

In addition,

“a source community may include dissenting voices, and a grant of legal protection to those who speak on behalf of the community may silence those voices—always an issue when rights are vested in a group rather than an individual”.⁴⁰

³⁵ Harm de Blij, *Why Geography Matters: Three Challenges Facing America: Climate Change, the Rise of China, and Global Terrorism* (New York: Oxford University Press, 2005), p.108.

³⁶ Doris Estelle Long, “Branding the Land: Creating Global Meanings for Local Characteristics” in Irene Calboli and Edward Lee (eds), *Trademark Protection and Territoriality Challenges in a Global Economy* (Cheltenham: Edward Elgar Publications, 2014), p.107.

³⁷ Ronald Sackville, “Legal Protection of Indigenous Culture in Australia” (2003) 11 *Cardozo J. Int’l & Comp. L.* 711, 739–740.

³⁸ Chidi Oguamanam, *International Law and Indigenous Knowledge: Intellectual Property, Plant Biodiversity, and Traditional Medicine* (Toronto: University of Toronto Press, 2006), p.128.

³⁹ Angela R. Riley, “Indigenous Peoples and the Promise of Globalization: An Essay on Rights and Responsibilities” (2004) 14 *Kan. J.L. & Pub. Pol’y* 155, 161.

⁴⁰ Susan Scafidi, *Who Owns Culture?: Appropriation and Authenticity in American Law* (New Brunswick: Rutgers University Press, 2005), p.xii.

Because traditional knowledge and traditional cultural expressions often involve intangible materials, “more than one community [could have made] similar use of the same resources, sometimes even using the same processes”.⁴¹ There have indeed been disputes among indigenous communities over lineage and heritage. For instance, conflict arose in 1999

“when the National Park Service concluded that Navajos have a legitimate ‘cultural affiliation’ with the Anasazi culture of Chaco Canyon National Monument in northwestern New Mexico”.⁴²

As Michael Brown explained:

“The Anasazi—a name now rejected by Pueblo tribes in favor of ‘Ancestral Puebloans’—constructed magnificent cliff dwellings and multi-storied stone structures that draw thousands of tourists to Chaco Canyon, Mesa Verde, and other national parks in the Southwest. Ancestral Puebloans are said to have vanished in the thirteenth century A.D., but the preponderance of scientific evidence, which in this case generally agrees with Pueblo oral history, supports the view that the cliff dwellers scattered throughout the region to found the communities today identified as Pueblo. Contemporary Pueblo people react to the assertion that Navajos have a ‘cultural affiliation’ with the Anasazi about the same way the Irish would respond to an English claim of affiliation with pre-sixteenth-century cultural remains in Ireland.”⁴³

There have also been disputes over the origin of practices and beliefs as well as to whom the sacred places belong. The Hopis, for example, have “publicly complained about non-Hopi (especially Navajo) artists creating what is otherwise traditionally Hopi art as well as such commercial ventures as a liquor company decanter in the form of a kachina and a comic book featuring kachina characters”.⁴⁴ As an employee of the Hopi Cultural Preservation Office complained:

“[T]he Navajos are taking Hopi qualities, saying that they came into the fourth world and that they have four sacred colors for the directions. But those ideas came from us. Now they are involved in eagle gathering, which is a Hopi practice. We Hopis don’t talk first in public gatherings anymore. Now we’re afraid that if we say something, the Navajos will say that it’s theirs too.”⁴⁵

As if these situations were not complicated enough, the indigenous communities involved could be making competing claims over something that was actually created by or derived from a third community, which has yet to be identified, no longer exists or chooses to stay neutral.⁴⁶ To take one recent example, regarding the ownership of a sacred bundle held by the American Museum of Natural History,

“Montana, Saskatchewan, and Manitoba Crees are all independently claiming ownership as is the adopted great-great-grandson of Plains Cree Chief Big Bear. Determining who owned the bundle after Big Bear’s death, and thus whether the transfer was legitimate, will not be an easy task.”⁴⁷

Given these many complications, the challenge of figuring out who could decide on the treatment of traditional knowledge and traditional cultural expressions in a geographical region can be quite daunting. Determining whether we should defer to the choices of indigenous communities is only the beginning of

⁴¹ Naomi Roht-Arriaza, “Of Seeds and Shamans: The Appropriation of the Scientific and Technical Knowledge of Indigenous and Local Communities” (1996) 17 Mich. J. Int’l L. 919, 957.

⁴² Michael F. Brown, *Who Owns Native Culture?* (Cambridge, MA: Harvard University Press, 2003), p.20.

⁴³ Brown, *Who Owns Native Culture?* (2003), p.20.

⁴⁴ James D. Nason, “Native American Intellectual Property Rights: Issues in the Control of Esoteric Knowledge” in Bruce Ziff and Pratima V. Rao (eds), *Borrowed Power: Essays on Cultural Appropriation* (New Brunswick: Rutgers University Press, 1997), p.248.

⁴⁵ Brown, *Who Owns Native Culture?* (2003), p.19.

⁴⁶ Marion P. Forsyth, “International Cultural Property Trusts: One Response to Burden of Proof Challenges in Stolen Antiquities Litigation” (2007) 8 Chi. J. Int’l L. 197, 198.

⁴⁷ Sarah Harding, “Justifying Repatriation of Native American Cultural Property” (1997) 72 Ind. L.J. 723, 724.

the inquiry, not the end. In a dispute involving two or more indigenous groups, invoking the right to self-determination is unlikely to result in a satisfactory resolution. As Richard Ford explained:

“[W]hy should area X be the relevant community, when area X plus Y might provide an equally or more valid definition of community? The answer cannot appeal to the right of community self-determination: if the people in area Y claim to be part of the larger community X plus Y, then should not their opinion be considered as well as that of the people in area X?”⁴⁸

Consider, for instance, the early example concerning the disagreement between two groups within an indigenous community. Although strong claims can be made to ensure that the group in the original geographic location determines for the community, it is hard to ignore the important countervailing interests of the departing group—either because they do not have the numbers to prevail in a majority contest or because they have chosen to leave. To some extent, this departing group—either as prior users or continuing innovators—deserves some form of protection (such as “the continuation of bona fide prior use”).⁴⁹

Moreover, regardless of its size, if this departing group continues to maintain a traditional lifestyle, the use of traditional materials is likely to remain important to its members. In addition, the heritage of the community (before the split) will always remain part of the departing group’s cultural heritage. Just because the group is no longer part of the community does not mean that the group members should also give up their heritage.

To help address complications created by the disputes between different indigenous communities and to offer greater protection to these communities, commentators have advanced a number of proposals. Although this section does not allow me to discuss in detail all of these proposals, it will focus on four proposals that are both somewhat distinctive and relevant to our geographically related discussion.

The first proposal concerns the use of trusts, which are particularly useful in situations involving unidentified or not-completely-identified owners. To some extent, the situations resemble the challenge of identifying cultural artefacts in the case of *Peru v Johnson*, in which a US court rejected Peru’s claims based on the fact that the contested artefacts could also be found in Bolivia or Ecuador.⁵⁰ To remedy these problems, commentators have proposed the establishment of “international cultural property trusts” to enable countries to share responsibility for and benefits of their shared cultural heritage.⁵¹ As appealing as it may be, this proposal only works when countries agree to work with each other or when they agree to be subjected to the jurisdiction of a neutral party (such as a foreign court or an arbitration panel). There are also the inevitable questions concerning fairness in allocation of proceeds, operating costs and management issues.

The second proposal concerns the use of existing legal concepts, such as concurrent ownership, joint authorship and derivative works. To be certain, these concepts have already been well received within the intellectual property community. They could therefore provide good and well-tested solutions to the existing problem. Nonetheless, as Silke von Lewinski reminded us in regard to the concept of co-authorship,

“because of the lack of individual authorship in expressions of folklore, applying the concept of co-authorship does not remedy the situation, because co-authors are still individual authors who have decided to create a work together and according to a common plan”.⁵²

⁴⁸ Richard T. Ford, “The Boundaries of Race: Political Geography in Legal Analysis” in Blomley, Delaney and Ford, *The Legal Geographies Reader* (2001), p.95.

⁴⁹ Antony Taubman, “Saving the Village: Conserving Jurisprudential Diversity in the International Protection of Traditional Knowledge” in Keith E. Maskus and Jerome H. Reichman (eds), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime* (Cambridge: Cambridge University Press, 2005), p.545.

⁵⁰ 720 F. Supp. 810 (CD Cal 1989).

⁵¹ Forsyth, “International Cultural Property Trusts” (2007) 8 Chi. J. Int’l L. 197, 202.

⁵² Silke von Lewinski, “The Protection of Folklore” (2003) 11 Cardozo J. Int’l & Comp. L. 747, 758.

Moreover, the use of these legal concepts could raise complications when such ownership goes beyond state lines. Although conflict of law principles could come into play, divergences exist among laws concerning concurrent ownership, joint authorship and derivative works in different countries. The solution can also be quite complicated if the original community has yet to be identified, no longer exists or chooses to stay out of the dispute.

The third proposal concerns the use of geographical indications.⁵³ This solution is increasingly popular and well supported by both the TRIPS Agreement and the Lisbon Agreement for the Protection of Appellations of Origin and Their International Registration. Nevertheless, there remains an ongoing debate concerning whether the protection of geographical indications in the TRIPS Agreement should be extended beyond the protection of wines and spirits to cover all other products, such as Basmati rice, Darjeeling tea and products involving traditional knowledge and traditional cultural expressions.⁵⁴ There are also concerns that these indicators may be of limited market value. As a result, indigenous communities may need to conduct “advertising activities to promote the favourable features of [geographical indications] products ... to improve their market share and profitability”.⁵⁵

In addition, location-based indicators could create perverse incentives for non-indigenous communities to drive out their indigenous counterparts. Indeed, the more protection the immobile lands provide, the more motivation the former will have to fight for the control of these lands. This is what Doris Long has sometimes referred to as the “tyranny of the land”. Moreover, as Madhavi Sunder noted in her discussion of whether traditional Indian weavers from Mysore should be allowed to use the same geographical indication after moving to North India or the United Kingdom:

“There are good reasons to prevent the alienation of the [geographical indication] from the particular geographical community. It prevents the scenario in which a large foreign corporation hires a member of that community away and then begins to produce ‘authentic’ work elsewhere, using that [geographical indication]—and decimating the livelihoods of the traditional community left behind. At the same time, such a restriction could stifle opportunities for some individuals, as they remain within a traditional community by economic necessity, not choice. People move, intermarry, and change jobs. Culture flows with them.”⁵⁶

The final proposal concerns the use of certification or authenticity marks. Commentators have widely cited the benefits of indigenous marks, including the authenticity labelling system developed by the National Indigenous Arts Advocacy Association (NIAAA) in Australia and the “toi iho” mark used for Maori arts and crafts in New Zealand.⁵⁷ Peter Drahos noted the need to draw on the experience of the fair trade movement to help indigenous communities develop a system of certification that could be used for marketing products worldwide.⁵⁸ In addition, Margaret Chon called for greater consumer involvement and public oversight in standard-setting and certification processes.⁵⁹ Nevertheless, these proposals are not without problems. As Kathy Bowrey reminded us, the NIAAA authenticity labelling system

“faltered for a number of reasons, including issues related to managing the diversity of ‘authentic’ expressions, the inappropriateness of a unitary national system for Indigenous Australia, problems

⁵³ Philippe Cullet, *Intellectual Property Protection and Sustainable Development* (New Delhi: LexisNexis Butterworths, 2005), pp.333–337; Teshager W. Dagne, *Intellectual Property and Traditional Knowledge in the Global Economy: Translating Geographical Indications for Development* (New York: Routledge, 2015); Daphne Zografos, *Intellectual Property and Traditional Cultural Expressions* (Cheltenham: Edward Elgar Publishing, 2010), pp.164–189.

⁵⁴ Dev Gangjee, *Relocating the Law of Geographical Indications* (Cambridge: Cambridge University Press, 2012), pp.266–288.

⁵⁵ Dagne, *Intellectual Property and Traditional Knowledge in the Global Economy* (2015), p.144.

⁵⁶ Madhavi Sunder, “The Invention of Traditional Knowledge” (Spring 2007) *Law & Contemp. Probs.* 97, 115.

⁵⁷ Zografos, *Intellectual Property and Traditional Cultural Expressions* (2010), pp.108–113; Maui Solomon, “Protecting Maori Heritage in New Zealand” in Barbara T. Hoffman (ed.), *Art and Cultural Heritage: Law, Policy and Practice* (Cambridge: Cambridge University Press, 2006), p.355.

⁵⁸ Peter Drahos, “A Networked Responsive Regulatory Approach to Protecting Traditional Knowledge” in Gervais (ed.), *Intellectual Property, Trade and Development* (2007), pp.402–404.

⁵⁹ Margaret Chon, “Marks of Rectitude” (2009) 77 *Fordham L. Rev.* 2311.

in defining and evidencing the requisite Aboriginality, associated questions about who could administer ‘quality control’ and management issues related to the NIAAA”.⁶⁰

In sum, the mismatch between political geography and cultural geography has generated many challenging questions. It is therefore no surprise that, after more than a decade and a half, the IGC still has not been able to develop formal instruments on genetic resources, traditional knowledge and traditional cultural expressions. Although leaders from developing countries and indigenous communities have often complained about the lack of political will on the part of developed countries to reach an international agreement, the standard-setting challenges in this rather controversial area should not be underestimated.

Legal and human geography

The final set of mismatches occurs between legal geography and human geography—specifically the geography of increasingly mobile human consumers from different parts of the world. Although territorially based, legal geography has now gone beyond territorial borders, thanks to the rise of transnational corporations and their active deployment of contracts and technological measures.

The example I have used repeatedly to illustrate the challenge of matching legal protection to political geography is DVD region codes.⁶¹ While these codes provide a textbook illustration of the use of geographical restrictions to protect copyrighted content, region-based restrictions can be found on many other consumer products—including those developed before the digital age (such as power plugs and sockets). Today, region codes have been widely used to protect not only movies and television shows, but also music, computer software, online games and, surprisingly, even printer toner cartridges.⁶² When keyed to local wireless providers, lockout codes have also been successfully deployed in cell phones to provide geographical restrictions, even though these codes technically do not have the same design and functionality as DVD region codes.⁶³

More recently, a growing number of YouTube accounts have imposed geographical restrictions to prevent viewers from having access to all content, thereby taking away YouTube’s earlier strength as a region-free platform for disseminating and viewing content. Apple’s iTunes Store

“has [also] established different pricing structures for different countries; their [digital rights management] protects against consumer arbitrage, and their servers ensure that anyone trying to log onto, say, the U.S. iTunes website from a U.K. computer will be automatically redirected to the British site”.⁶⁴

In addition, to meet user needs and to ensure data retention in a contracted-for location, providers of cloud computing services have begun to introduce the so-called regional cloud, or cloud services within a “regional zone”.⁶⁵ In short, geographical restrictions are now ubiquitous; they can be found in not only consumer goods but also cloud services.

The rationale for recreating territorial boundaries—or reterritorialising—through the use of technology is not hard to understand. The introduction of the internet and other new communications technologies has greatly eroded—or deterritorialised—the traditional territorial boundaries used to protect intellectual property rights. As the former Lord Justice of Appeal Sir Robin Jacob declared in the early 2000s, “as

⁶⁰ Kathy Bowrey, “*International Trade in Indigenous Cultural Heritage: An Australian Perspective*” in Graber, Kuprecht and Lai (eds), *International Trade in Indigenous Cultural Heritage* (2012), pp.423–424.

⁶¹ Peter K. Yu, “Region Codes and the Territorial Mess” (2012) 30 *Cardozo Arts & Ent. L.J.* 187.

⁶² Yu, “Region Codes and the Territorial Mess” (2012) 30 *Cardozo Arts & Ent. L.J.* 187, 257.

⁶³ Ryan L. Vinelli, “Bringing Down the Walls: How Technology Is Being Used to Thwart Parallel Importers amid the International Confusion Concerning Exhaustion of Rights” (2009) 17 *Cardozo J. Int’l & Comp. L.* 135, 139.

⁶⁴ Tarleton Gillespie, *Wired Shut: Copyright and the Shape of Digital Culture* (Cambridge, MA: MIT Press, 2007), p.267.

⁶⁵ Simon Bradshaw, Christopher Millard and Ian Walden, “Standard Contracts for Cloud Services” in Christopher J. Millard (ed.), *Cloud Computing Law* (Oxford: Oxford University Press, 2013), p.55; W. Kuan Hon and Christopher Millard, “How Do Restrictions on International Transfers of Personal Data Work in Clouds?” in Millard (ed.), *Cloud Computing Law* (2013), pp.274–275.

time goes on, ... the world will realize that at least for intellectual property the days of the nation-state are over".⁶⁶

To better understand how copyright holders have used technological measures to reintroduce legal control over media content, consider the protection provided by DVD region codes. Under the current technological set-up for traditional DVDs, as opposed to Blu-ray DVDs, the world is divided into six regions (plus additional regions for uses on cruise ships and airlines and for screener copies).⁶⁷ United States was designated Region 1, while the United Kingdom and Hong Kong were designated Region 2 and Region 3, respectively. Because of region codes, a DVD a US consumer purchased at the London Heathrow Airport (which is coded for Region 2) is unlikely to be viewable on her DVD player at home despite the individual's lawful purchase in England.

Thus far, industries and commentators have advanced four widely cited justifications to explain why geographical restrictions are introduced to protect copyrighted content. First, these codes enable entertainment products to arrive at different markets at different times, creating windows for sequential distribution. Such windows are needed for both economic and practical reasons. For example, foreign release may have to be delayed due to the travel schedules of directors, actors, writers and producers, the presence of whom is important for promotion.⁶⁸ Studios may also need time for "local/video duplication, dubbing and/or sub-titling, promotion, or dealing with censors".⁶⁹ In addition, a summer movie shown in the United States during the July 4th weekend may not perform as well in the box office if shown at the same time in Australia and New Zealand (which are in the middle of winter). Likewise, a blockbuster movie opening in Hollywood during Thanksgiving may perform much better if shown a month or two later in Hong Kong, during either Christmas or the Chinese New Year.

Secondly, region codes facilitate the practice of price discrimination,⁷⁰ which enables rights holders to maximise profits by "charg[ing] a high price to high valuation users and a low price to low valuation users".⁷¹ Such a practice not only allows these studios to recoup costs in the home market before exporting the product abroad,⁷² but also enables them to price the product according to the cost of living in foreign countries. For instance, region codes allow Mexican consumers to buy DVDs of Hollywood movies at local retail prices, not the higher US retail prices.

Thirdly, region codes facilitate distribution and licensing arrangements.⁷³ Although content providers could directly distribute products throughout the world, they often establish distribution and licensing agreements instead.⁷⁴ Such arrangements make sense for both practical and business reasons. By making the licensed product more attractive to local consumers, regional distributors and exclusive licensees could also add value to the original work.

Finally, region codes respond to the considerably diverse regulatory standards across the world.⁷⁵ For example, film ratings vary largely from country to country. While China has been a poster child for movie

⁶⁶ Hon Mr Justice [Robin] Jacob, "International Intellectual Property Litigation in the Next Millennium" (2000) 32 Case W. Reserve J. Int'l L. 507, 516.

⁶⁷ "DVD Region Code", available at http://en.wikipedia.org/wiki/DVD_region_code [Accessed December 3, 2014]; Robert Silva, "DVD Region Codes—What You Need to Know", available at <http://hometheater.about.com/cs/dvd/laserdisc/a/aaregioncodesa.htm> [Accessed December 3, 2014].

⁶⁸ Claude E. Barfield and Mark A. Groombridge, "The Economic Case for Copyright Owner Control over Parallel Imports" (1998) 1 J. World Intell. Prop. 903, 929; Brian Hu, "Closed Borders and Open Secrets: Regional Lockout, the Film Industry, and Code-Free DVD Players" (Spring 2006) *Mediascape* 4, available at http://www.fti.ucla.edu/mediascape/Spring06_ClosedBordersAndOpenSecrets.pdf [Accessed December 3, 2014]; Peter K. Yu, "Anticircumvention and Anti-anticircumvention" (2006) 84 Denv. U. L. Rev. 13, 75.

⁶⁹ Barfield and Groombridge, "The Economic Case for Copyright Owner Control over Parallel Imports" (1998) 1 J. World Intell. Prop. 903, 930.

⁷⁰ Rostam J. Neuwirth, "The Fragmentation of the Global Market: The Case of Digital Versatile Discs (DVDs)" (2009) 27 *Cardozo Arts & Ent. L.J.* 409, 422–423; Harold L. Vogel, *Entertainment Industry Economics: A Guide for Financial Analysis*, 8th edn (Cambridge: Cambridge University Press, 2011), pp.206–209.

⁷¹ Michael J. Meurer, "Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works" (1997) 45 *Buffalo L. Rev.* 845, 850.

⁷² Neuwirth, "The Fragmentation of the Global Market" (2009) 27 *Cardozo Arts & Ent. L.J.* 409, 423.

⁷³ Jim Taylor, Mark R. Johnson and Charles G. Crawford, *DVD Demystified*, 3rd edn (New York: McGraw-Hill, 2006), p.5-19; Yu, "Region Codes and the Territorial Mess" (2012) 30 *Cardozo Arts & Ent. L.J.* 187, 209–213.

⁷⁴ Vogel, *Entertainment Industry Economics*, 8th edn (2011), p.127.

⁷⁵ Caitlin Fitzsimmons, "Restricting DVDs 'Illegal' Warns ACCC" *Australian IT*, March 27, 2001, p.33; Neuwirth, "The Fragmentation of the Global Market" (2009) 27 *Cardozo Arts & Ent. L.J.* 409, 426.

ensorship,⁷⁶ thus leading the country to have its own region (Region 6), the film ratings in Europe and the United States can also vary quite significantly. A case in point is Stanley Kubrick's *Eyes Wide Shut*, whose orgy scene has been digitally altered to meet the US censorship ratings.⁷⁷

Moreover, region codes can be used to address piracy and counterfeiting problems in China and Southeast Asia, both hotbeds of movie piracy.⁷⁸ Having separate region codes—Region 6 for China and Region 3 for Southeast Asia—allows movie studios to respond to piracy problems—perhaps by deploying additional technological protection measures or introducing holograms or other hard-to-copy packaging features. Even if no additional measures or features are introduced, the use of separate region codes will ensure that the geographically restricted DVDs, if pirated, will not compete with DVDs sold in the primary markets in North America, Europe and Japan (which are in Regions 1 and 2).

Notwithstanding these justifications, questions arise once economic and human geography is taken into consideration. Consider, for example, the countries listed in Region 4. These countries include Argentina, Australia, Brazil and Haiti, the majority of whose inhabitants speak Spanish, English, Portuguese and French, respectively. Even if we ignore the linguistic differences, it is hard to imagine how grouping these highly divergent economies together would allow region codes to price discriminate effectively. Australia is a member of the Organisation for Economic Co-operation and Development. According to the 2013 World Bank indicators, its gross domestic product (GDP) amounted to over \$1.5 trillion. By contrast, Haiti, also in Region 4, had a GDP of only \$8 billion. Given the significant differences in economic power between these two countries, there is a very strong likelihood that those DVDs that Australian consumers find appealing are considered unaffordable by many in Haiti.

When one focuses on Region 5, the problems with DVD region codes become even more obvious. This region includes not only two BRICs countries (India and Russia), but also some members of the European Union as well as all countries in Africa (except Egypt and South Africa). This group makes no sense in terms of physical, economic or human geography. To put it bluntly, Region 5 seems to be the region about which Hollywood does not care much. To a large extent, it reflects the same problematic mentality many US entertainment lawyers have over the term "R.O.W."—that is, "rest of the world".

As if these problems were not bad enough, questions have been raised over whether geographical restrictions have become obsolete in an environment where a growing number of movies are released worldwide on the same day, due in large part to the concerns about digital piracy and in part to the fear that spoilers will become available on the internet. In an earlier article, I have also identified a number of problems raised by DVD region codes, which range from the inconvenience caused to frequent travellers and expatriate workers⁷⁹ to insensitive barriers posed to immigrant families and foreign students who seek to use DVDs to teach or learn foreign languages.⁸⁰

In recent years, international leaders, policy makers and academic commentators seem to have paid greater attention to the mismatch between legal geography and other types of geography. Leading the way was the European Commission's recently concluded "Licences for Europe" Stakeholder Dialogue, which considered the "cross-border portability of subscription services" a priority. As the European Union declared in a document entitled *A Digital Agenda for Europe*:

"Consumers expect, rightly, that they can access content online at least as effectively as in the offline world. Europe lacks a unified market in the content sector. For instance, to set-up a pan-European service an online music store would have to negotiate with numerous rights management societies

⁷⁶ Mary Lynne Calkins, "Censorship in Chinese Cinema" (1999) 21 *Hastings Comm. & Ent. L.J.* 239; Carl Erik Heiberg, "American Films in China: An Analysis of China's Intellectual Property Record and Reconsideration of Cultural Trade Exceptions amidst Rampant Piracy" (2006) 15 *Minn. J. Int'l L.* 219.

⁷⁷ Hu, "Closed Borders and Open Secrets" (Spring 2006) *Mediascape* 2; Neuwirth, "The Fragmentation of the Global Market" (2009) 27 *Cardozo Arts & Ent. L.J.* 409, 426–427.

⁷⁸ Fitzsimmons, "Restricting DVDs 'Illegal' Warns ACCC" *Australian IT*, 2001, p.33.

⁷⁹ Yu, "Region Codes and the Territorial Mess" (2012) 30 *Cardozo Arts & Ent. L.J.* 187, 217.

⁸⁰ Yu, "Region Codes and the Territorial Mess" (2012) 30 *Cardozo Arts & Ent. L.J.* 187, 227–228.

based in 27 [now 28] countries. Consumers can buy CDs in every shop but are often unable to buy music from online platforms across the EU because rights are licensed on a national basis. This contrasts with the relatively simple business environment and distribution channels in other regions, notably the US, and reflects other fragmented markets such as those in Asia”⁸¹

Since the 2013 General Assembly, WIPO Director General Francis Gurry has also noted the importance of creating “a seamless global digital marketplace”.⁸² As he recently explained in an interview with the *Intellectual Property Watch*:

“For as long as it is easier to get content illegally than it is to get it legally, there is an encouragement to piracy. We have to make the conditions to get it legally better than illegally and that is the global digital marketplace.

Let me give you another example: if one of the HBO series comes out in a new season in, for example, the US but is not available in the new season in certain other countries. What do people do? Do they wait patiently for three months? No, because they are addicted! So this is where I think our objective ought [to] be a seamless global legal digital marketplace and I think everyone has agreed on this.”⁸³

Although Dr Gurry did not believe the creation of this global digital marketplace should be “a legislative exercise”, he noted the need to establish “a multi-stakeholder dialogue” to facilitate such creation. It remains to be seen whether such a dialogue would help kick start international discussions in this area.

To a large extent, the need for the development of “a seamless global digital marketplace” highlights the growing mismatch between legal geography and human geography. Today, people are no longer just watching programs on television or listening to CDs. Instead, they write email, listen to music stored in the cloud, generate mash-ups of worldwide digital content and watch foreign shows recommended by distant friends. Any laws that fail to consider these activities and the related consumer expectations will quickly become obsolete.

Conclusion

Intellectual property and geography is not yet a common topic for analysis in intellectual property literature. Yet, the discussion of geographical indications, traditional knowledge, traditional cultural expressions, climate change, high-technology innovation clusters, regional trade agreements, cloud-based distribution platforms, geolocation tools and GPS navigation have raised important questions that would require a deeper and more thorough understanding of geography. Although it is too early to tell whether a theoretical or “methodological turn” towards greater geographical understanding and spatial analysis of intellectual property law and policy will eventually emerge,⁸⁴ it is my hope that the contributions in this special issue will help us develop a deeper appreciation of the connection between intellectual property and geography. It is also my hope that these contributions will provide unique insights and approaches that could be useful in the years to come. I hope you will enjoy this special issue.

⁸¹ “A Digital Agenda for Europe”, COM (2010) 245 final/2, 2010, p.7.

⁸² Francis Gurry, “Address by the Director General”, available at http://www.wipo.int/about-wipo/en/dgo/speeches/a_51_dg_speech.html [Accessed December 3, 2014].

⁸³ Catherine Saez, “WIPO Director Gurry Speaks on Naming New Cabinet, Future of WIPO” *Intellectual Property Watch*, May 8, 2014.

⁸⁴ Irus Braverman, “Who’s Afraid of Methodology: Advocating a Methodological Turn in Legal Geography” in Braverman, Blomley, Delaney and Kedar (eds), *The Expanding Spaces of Law* (2014).