Keeping traditions

Protecting traditional knowledge is part of key efforts to deter biopiracy and misappropriation of indigenous cultures. Nonetheless, it is a difficult task as various forms do not fit neatly into the western IP model. **Yvonne Ochilo** discusses the challenges

Ancient folklore and rituals of the Maasai and Maori peoples may seem outdated and misplaced in a contemporary era marked by Skyscrapers, iPhones, electric cars, and Facebook. However, civil rights activist Marcus Garvey said: "A people without the knowledge of their past history, origin and culture is like a tree without roots," and elements of the way of life of these tribes have sparked interest in the mainstream.

With the growth of tourism and technology, their art and adornments are replicated and their oral history and folklore are recreated in movies or published, not always accurately and without acknowledgment.

On one hand, the Maori and Maasai are rich because they embrace the common thread that weaves humanity together – a desire for intergenerational connectedness and a sense of belonging. On the other hand, their dedication to communal ownership of knowledge coupled with minimal, or no state protection for traditional knowledge (TK) in local communities has led to pillaging and misappropriation. Nonetheless, in some cases, the commercialisation of TK has been a rude awakening for developing nations, propelling the drafting of overdue intellectual property (IP) laws, or the revamping and enforcement of existing ones.

For instance, in 2005 Ghana's second Copyright Act was enacted to strengthen protection of folklore and prevent foreign exploitation. In addition, Ghana was one of the first countries to impose a domestic tax on its own citizens for unauthorised commercial use of its folklore. Similarly, in August 2010, the African Regional Intellectual Property Organization (ARIPO) adopted the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore. The goal of the protocol is to ensure that states use TK for "economic development and wealth creation" while preventing "ongoing misappropriation, bio-piracy, and illicit claim(s) of traditional knowledge-based inventions and patents."[1]

Another example is that of the Maasai who are fighting to protect and "brand" their TK. Their cultural artifacts, beadwork, clothing style, and nomadic way of life has been exploited. There is minimal protection and enforcement by the government. Many do not receive a "fair exchange" or "profit" for their hand-crafted beadwork which is intricate and labourious.

However, there are some exceptions to the norm. For example, UK-based Koy Clothing is a design company that donates 5% of their profits back to the Maasai. In addition, the company also plans to work with the Maasai IP Initiative and the African IP Trust to assist the Maasai in protecting their commodities as well as ensuring that they benefit economically.[2]

Aside from the issues raised by the plight of the Maasai, Maori, and Ghanaian folklore, perhaps the most famous example of the exploitation of TK is the 1994 Basmati Rice case ("BR"); a controversy that involved several patent claims to Indian basmati rice. Indeed, the Maasai, Maori, and the BR case that will be discussed in detail later are microcosms that illustrate a larger phenomenon that stifles international cooperation, international trade and leads to the unnecessary oppression of indigenous peoples.

There is now strong argument for the recognition of TK as a legitimate form of IP rights to be enforced by the international community. Furthermore, by protecting TK and recognising its validity within western IP ideology, the international community will embrace the most fundamental tenet of IP law – the protection of (intellectual) property in general is outweighed by no protection at all. It will also bolster international trade by supporting the efforts of the World Intellectual Trade Organization (WIPO), the ARIPO, and the United Nations Educational, Scientific, and Cultural Organization (UNESCO), NGOs and local communities, and ensure, to a certain extent, that indigenous cultures are benefiting economically and have a better standard of living as a result of their own wealth creation.

Defining TK

Former prime minister of India, Jawaharlal Nehru, said that "culture is the widening of the mind and of the spirit" and to this end, globalisation has allowed international trade to flourish while building cultural bridges and breaking economic barriers. Regardless, as illustrated by the BR controversy, developing nations continue to face an enormous challenge – the recognition and (adequate) protection of TK within a pre-existing IP model predominantly influenced by western ideology. Although this IP framework of copyright, patents, trademark, and trade secret is fundamental to protecting ideas, rewarding authors and inventors for their original works and inventions, and providing economic incentives to inspire creativity, there is often a lack of, or gap in, the protection of TK.

Although there is no universal definition of TK, there is general consensus that TK includes artistic and literary expressions, biological

and genetic resources that are unique to indigenous cultures. For example, WIPO defines TK as "economic and cultural assets of indigenous and local communities and their countries."[3] On the other hand, ARIPO's definition is expansive, describing TK as inclusive of herbs, herbal medicinal practices, and biological resources that are specific to a region and which have been passed from one generation to the next.[4]

While the definitions differ slightly, it should be noted that what distinguishes TK from other IP rights is its link to an indigenous people or culture from a particular region or country. Currently, TK is protected through defensive protection and positive protection. According to WIPO, defensive protection protects TK by ensuring that IP rights, such as patents, are not awarded to states other than the original or customary TK holders.[5] On the other hand, positive protection seeks to empower developing nations by promoting the enactment of *sui generis* laws or the drafting of contracts and treaties that protect TK.

Another international milestone that promotes IP protection generally, though not specific to TK, occurred during the 1986-1994 Uruguay Round of trade negotiations that culminated with the agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). Its primary purpose is to establish:

- Minimal levels of IP protection that WTO member states are entitled to in accordance with the Most Favored Nation (MFN) and National Treatment (NT) principles;
- Lessen economic repercussions by narrowing the gap between the First World and developing nations; and
- Where possible, IP protection that leads to the transfer and exchange of technology, not to exclusion.[6]

Despite the benefits of defensive protection, positive protection, and TRIPS, the legal gap in protecting TK still exists because no major multilateral treaty between First World and developing nations has specifically addressed the forms of TK that should be protected, what types of uses should be controlled, for example, publication or commercial use, what pre-existing IP legal standards can or should be applied to TK such as originality, novelty, non-obviousness, nor what enforcement strategies are technologically feasible and cost-effective for developing nations to combat foreign appropriation. Nevertheless, the inherent principles of fairness and equity embedded in existing IP rights can be used to resolve legal disputes arising from the misappropriation of TK, as evidenced by the basmati rice patent case.

Basmati rice case

The company RiceTec claimed that it had "invented" a new variety of basmati rice by cross-breeding basmati rice grown in India with semi-dwarf varieties grown in the west.

In India, Basmati Rice is grown in Kashmir, Punjab, Rajasthan, and various regions in Haryana.

In addition to its uniqueness, the rice is a diet staple, a symbol of cultural pride, a vital source of income for farming communities, and an important cash crop as demonstrated by the exponential increase in exports and by the fact that, after China, India is the second largest producer of rice in the world.

The US Rice Federation (RF) was formed in 1994 in response to foreign competition that negatively impacted the US rice industry by decreasing the demand for US rice internationally. Primarily, the US was not producing flavoured rice such as basmati, which became increasingly popular domestically and abroad. The federation became a means for US rice businesses to grapple with foreign competition by combining resources, engaging in marketing, and negotiations. Texas-based RiceTec is a part of the federation and boasts having the largest rice acreage in the US. It began investing in research that would result in patents protecting hybrid rice. Moreover, it and other companies hoped that by patenting hybrid rice that was "similar in quality" to Indian basmati rice, they would be guaranteed decreased imports of foreign rice and greater control in the international market, at least for a period of time.

Misappropriation

At the crux of India's economic growth in the late 1990s, litigation ensued between RiceTec's parent company, chaired by Prince Hans Adams II of Liechtenstein and the government of India. Formed in 1984, RiceTec began developing hybrid rice, seeds, and plants in 1988.

In 1994, RiceTec applied to patent "novel" (hybrid) basmati rice lines, plants, and grains.[7]

In 1997, the US Patent and Trademark Office (USPTO) granted RiceTec's Patent No 5,663,484 which allowed the company to brand its hybrid aromatic rice that was not grown in India as "Basmati". Essentially, RiceTec's patent claims before the USPTO led to an uproar in India and in the international community because Patent No 5,663,484 was perceived as theft and piracy of the highest degree. Consequently in 1998, India's Research Foundation of Science and Technology filed suit in India's Supreme Court on behalf of local farmers and in 2000, India challenged the USPTO's grant of the patent to RiceTec.[8]

India's patent procedure is contrary to that of the US in that in India, third parties challenge the patent before it has been issued. India's government challenged the USPTO's decision on two grounds, first, the cultivation of basmati rice is not "novel" because it is a form of TK (prior art), and secondly the USPTO's patent to RiceTec violated TRIPS. In addition, India brought the dispute before the WTO.

Prior art

The cultivation of basmati rice is a form of TK that originated in the Punjab and then spread to other regions such as Haryana, Rajasthan, and Kashmir. Therefore, in presenting its argument to the USPTO, India claimed that RiceTec could not claim that its hybrid rice was "novel" because the cultivation of basmati rice is considered "prior art".[9]

As a WTO member, India argued that RiceTec violated TRIPS because basmati rice qualified for Geographic Indicators of Origin (GIO) protection because it was cultivated and produced in specific regions – Punjab, Haryana, Rajasthan etc.

Generally, the WTO, WIPO, and EUROPA define GIOs as goods that are unique to, and originate from, a particular region or country. Currently, GIOs protect wines and spirits and agricultural products like cheese that are distinct in quality and taste.

Compelled by India's "prior art" argument (and evidence), international media attention and pressure against RiceTec, the USPTO reexamined the patent claims. As a result, the business voluntarily withdrew its claims on basmati rice lines and grains and, in 2001, the USPTO upheld five of the original 20 patent claims.

As demonstrated by the basmati rice case, TK needs to be protected domestically by its nation of origin and internationally. However, one of the challenges of protecting TK is rooted in differing value systems regarding ownership. In contrast to western mores, many indigenous cultures view ownership as communal rather than individual. For example, in Ghana, folklore is not owned by a single individual but collectively by the community. It is then passed down from one generation to the next by a storyteller as "oral history". Similarly, in Native American culture, the idea of collective ownership is present as evidenced by Native beliefs on land and stewardship. As a result, it is problematic to prove who owns some forms of TK such as folklore.

In addition, due to this communal standard of ownership, it is also difficult for TK to meet, or fit into, western IP rights such as patents Inherent in US patent law is the recognition of the individual, not that of a culture or territory In the TK context, knowledge is shared and the community does not necessarily define benefit

monetarily. Therefore, the incentives for TK in indigenous communities are opposed to those of western society.

Minimal or lack of any form of state protection for TK in local communities

Previously, developing nations faced challenges in (small) local communities or villages where amassing wealth from TK was not necessarily the primary goal. In these communities, the mindset is one of preserving TK through the intergenerational practice of passing down knowledge. However, some of these countries are now realising the importance of investing resources in education, research and developing strategies to protect TK.

In collaboration with international organisations such as UNESCO, some developing nations are learning cost-effective and sustainable strategies to protect TK. For example, in August 2002, UNESCO hosted the World Summit on Sustainable Development (WSSD). Primarily, the WSSD's objective was to allow developing nations the opportunity to shed light on scientific research and subsequent issues arising for patent claims to biodiversity. Secondarily, legal experts, indigenous peoples and activists from developing nations participated in three sessions focusing on the link between TK and natural resource management, formal education and threats to cultural diversity and the need for innovative measures to protect IP rights of indigenous peoples.[10]

Moreover, during the WSSD, UNESCO presented its report on protecting biodiversity (plants, herbs, microorganisms) considered TK by developing nations but, in some cases, misappropriated by pharmaceutical companies in the north. Currently, the Convention on Biological Diversity protects biodiversity. Nonetheless, UNESCO contends that the expectations set forth in Art 8 of the CBD have "fallen short" in protecting TK in the field.[11] Moreover, in the past, northern nations like the US have expressed concern that stronger biodiversity protections deemed TK would spread "creationist ideas" as well as offer "blanket protection".

Combating misappropriation and bolstering the protection of TK

Despite criticisms and challenges to protecting TK, efforts such as those of UNESCO empower developing nations by promoting education and the (possible) enactment of *sui generis* legislation. Furthermore, legal scholars and TK experts encourage GIOs, and Patent Registry Systems (PRS).

In addition, regardless of the prior art exception to patents under US IP law, some scholars argue that a separate PRS is necessary. Essentially, the PRS would assist the USPTO in determining whether a patent claimed by a domestic or foreign company is a form of TK, and therefore unpatentable ie, – it does not meet the legal standard of novelty, non-obviousness and utility.

For example, Malathi Lakshmikumaran of the Tata Energy Research Institute (India) proposes that stronger patent systems would protect biodiversity, both in the nation of origin and internationally. As discussed earlier, India is rich in biodiversity having "49 indigenous major and minor crops" classified as "historic agriculture". Thus, Lakshmiumaran argues that TK protection would ensure that indigenous cultures benefit while cooperating (and making fair licence agreements) with scientists or pharmaceutical companies, seeking patents in the field of genetics, medicine, or biotechnology. Further, registry systems would deter misappropriation and biopiracy by providing a record/archive of TK.

In conclusion, the basmati rice case is a microcosm of the overarching issues and competing interests between the west and developing nations. On one hand, TK protection is necessary to promote economic development, deter biopiracy and misappropriation of indigenous cultures and biodiversity. On the other hand, protecting TK is a difficult task as various forms do not fit neatly into the western IP model. However, through the efforts of international organisations such as WIPO, UNESCO, ARIPO and treaties such as TRIPS and CBD, TK can be integrated, to a certain extent, into IP law.

Nevertheless, the burden falls on the developing nations to enact *sui generis* laws and invest in research and cost-effective strategies to educate local communities on the importance of shifting their cultural mindset – from preserving TK to deriving economic benefit. Finally, the task of litigating biopiracy or misappropriation claims by developing nations can strengthen TK protection on an international level.

Footnotes

1. ARIPO Mandate on the Protection of Genetic Resources, Traditional Knowledge and Expressions of Folklore – http://www.aripo.org/index.php?option=com_content&view=article&id=16&Itemid=68
2. https://koyclothing.com/pages/about-us
3. http://www.wipo.int/tk/en/
4. The precise definition of TK according to ARIPO is "the cumulative body of knowledge and beliefs handed down from generation to generation, by cultural transmission, about the relationship between living beings with one another and with their environment…[T]his knowledge is established on past experiences and observations." See http://www.aripo.org/index.php?option=com_content&view=article&id=37&Itemid=69
5. http://www.wipo.int/tk/en
6. http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm
7. RiceTec submitted 20 patent claims to the USPTO. See USPTO's full text and image database" at http://patft.uspto.gov/
8. See http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=5663484.PN.&OS=PN/5663484&RS=PN/5663484
9. For example, in the 2005 *Neem* case (EPO), the RFSTE, the International Federation of Organic Agriculture Movements and the Greens/European Free Alliance defeated a patent on the Neem tree, arguing that it was "prior art" to extract/use its seeds for healing properties and therefore it could not be used in the production of fungicides. Essentially, the RFSTE *et al*, argued that a Patent on the Neem tree was a form of biopiracy. Thus, this case became the first to legally defeat a Patent/biopiracy claim that spun 10 years. See 'Freeing the Free Trade- A briefing paper on the first legal defeat of a biopiracy patent (the Neem Case)' by Linda Bullard (March 2005).
10. See 'Innovative Measures required to protect indigenous knowledge.' Statement from UNESCO office (2002). http://portal.unesco.org/es/ev.php-URL_ID=5633&URL_DO=DO_TOPIC&URL_SECTION=201.html
11. Art. 8 (j)-'Traditional Knowledge, Innovations and Practices' of the CBD reads "[e]ach contracting Party shall, as far as possible and as appropriate: Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge innovations and practices." See http://www.cbd.int/traditional/

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