

WIPO MAGAZINE

AUGUST 2019

No. 4



Curbing cultural appropriation in the fashion industry with intellectual property

p. 9



With Teqball the world is curved

p. 26



Singapore's biggest copyright reform in 30 years

p. 15

A large graphic featuring a molecular structure overlaid on a grid pattern, representing medical innovation. The molecular structure is made of blue and white spheres connected by rods. The grid pattern is a mix of blue and purple. The background is a light blue and white grid.

GII 2019: Creating healthy lives – the future of medical innovation

p. 2

Table of Contents

2	GII 2019: Creating healthy lives – the future of medical innovation
9	Curbing cultural appropriation in the fashion industry with intellectual property
15	Singapore's biggest copyright reform in 30 years
20	The harsh reality of life as a musician: an interview with Miranda Mulholland
26	With Teqball the world is curved
35	<i>In the Courts</i> Five years after <i>Alice</i> : five lessons learned from the treatment of software patents in litigation
39	<i>A History of Intellectual Property in 50 Objects</i>

Editor: **Catherine Jewell**
Layout: **Ewa Przybyłowicz**

© WIPO, 2019



Attribution 3.0 IGO
(CC BY 3.0 IGO)

The user is allowed to reproduce, distribute, adapt, translate and publicly perform this publication, including for commercial purposes, without explicit permission, provided that the content is accompanied by an acknowledgement that WIPO is the source and that it is clearly indicated if changes were made to the original content.

Adaptation/translation/derivatives should not carry any official emblem or logo, unless they have been approved and validated by WIPO. Please contact us via the WIPO website to obtain permission.

When content published by WIPO, such as images, graphics, trademarks or logos, is attributed to a third party, the user of such content is solely responsible for clearing the rights with the right holder(s).

To view a copy of this license, please visit <https://creativecommons.org/licenses/by/3.0/igo>

Acknowledgements:

2	Carsten Fink , Economics and Statistics Division, WIPO
9	Wend Wendland , Traditional Knowledge Division, WIPO
15	Anita Huss-Ekerhult , Copyright Management Division, WIPO
20	Michele Woods , Copyright Law Division, WIPO
26	Virag Halgand , Department for Transition and Developed Countries, WIPO
35	Tomoko Miyamoto and Marco Aleman , Patent Law Division, WIPO

Cover images:

Left to right: Courtesy of Marta Hewson / Angela DeMontigny; Courtesy of Teqball; iStock / Getty Images Plus / © Weedezeign;

Main image:

Getty Images / E+ / © BlackJack3D; Getty Images / DigitalVision / © Jorg Greuel

GLOBAL LEADERS IN INNOVATION 2019

Every year, the Global Innovation Index ranks the innovation performance of nearly 130 economies around the world.

THE TOP 5 GLOBAL INNOVATION LEADERS

1

SWITZERLAND

2

SWEDEN

3

UNITED STATES OF AMERICA

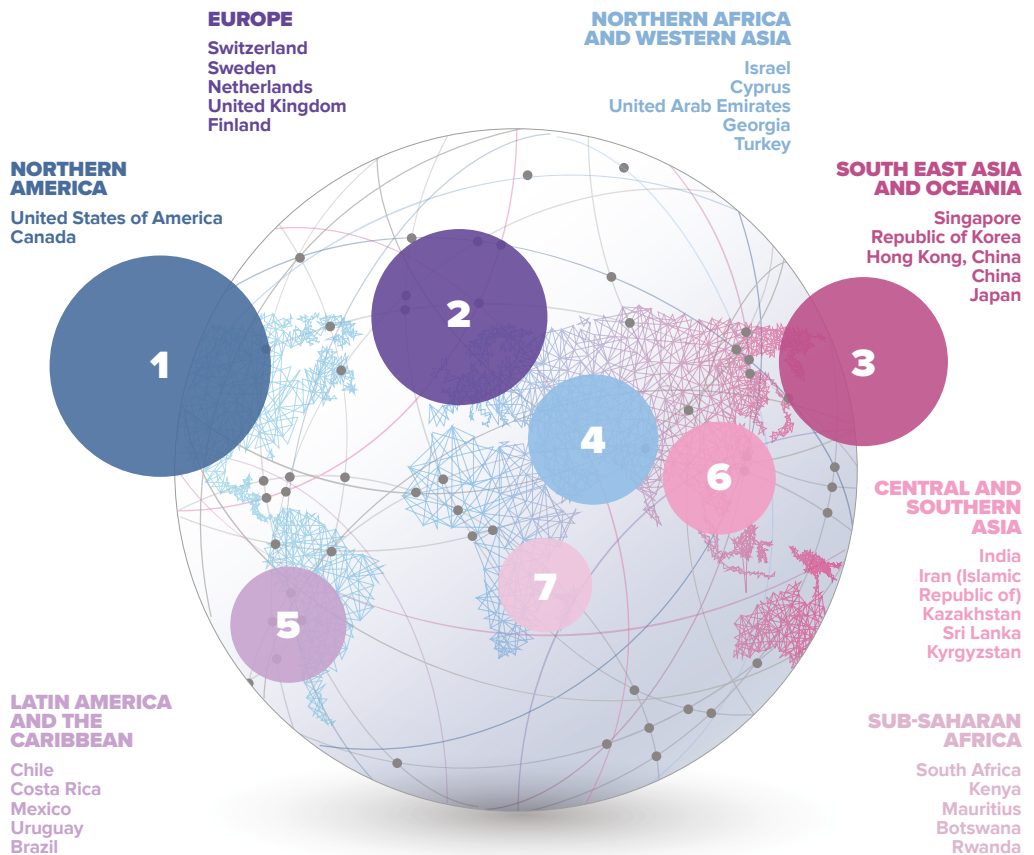
4

NETHERLANDS

5

UNITED KINGDOM

THE TOP 5 INNOVATION ECONOMIES BY REGION



THE TOP 5 INNOVATION ECONOMIES BY INCOME GROUP

Income Group	Top 5 Innovation Economies
High Income	Switzerland, Sweden, United States of America, Netherlands, United Kingdom
Upper-Middle Income	China, Malaysia, Bulgaria, Thailand, Montenegro
Lower-Middle Income	Viet Nam, Ukraine, Georgia, India, Mongolia
Low Income	Rwanda, Senegal, United Republic of Tanzania, Tajikistan, Uganda

www.wipo.int/global_innovation_index/en/2019

WIPO.INT/GII
#GII2019

GII 2019: Creating healthy lives – the future of medical innovation

By **Catherine Jewell**,
Publications Division, WIPO

The 2019 edition of the Global Innovation Index (GII), launched in New Delhi, India, in July, reveals the latest global ranking of countries on their innovation performance. Now in its 12th edition, the GIJ supports policymakers' understanding of how to foster and measure innovative activity, which is a key driver of social and economic development. GIJ 2019 also explores the future of medical innovation. Sacha Wunsch-Vincent, a senior economist at WIPO and one of the co-editors of the GIJ 2019, discusses some of the report's key findings.

What do GIJ 2019's rankings reveal?

Switzerland topped this year's GIJ rankings, followed by Sweden, the USA, Netherlands and the UK. China is now a firmly established world innovation leader and continues to improve its ranking. India too, maintains its top place in the Central and Asian region with top rankings in productivity growth and ICT-related services. The Republic of Korea also edged ever closer to the top ten GIJ countries, becoming the world leader in overall economy-wide investments and research and performing well in most R&D-related indicators. The Philippines and Viet Nam also improved in most indicators and achieved top ranks for high-technology imports and exports. For the seventh consecutive year, the innovation performance of more economies in Sub-Saharan Africa than in any other region outperformed their level of economic development.

How has the global innovation landscape evolved over the past 12 months?

GIJ 2019 reveals that the global economy is losing momentum and that investment and productivity growth are sluggish. Global foreign direct investment has fallen. And public R&D expenditure in some high-income countries that drive technological advances is very slow. Such spending is central to funding basic and other forward-looking research. Protectionism is also on the rise. These uncertainties are slowing forward-looking investment in innovation and putting global innovation networks and the diffusion of innovation at risk.

Innovation remains concentrated in a few wealthier economies and significant knowledge gaps persist between developed and developing economies. However, the good news is that today all economies are prioritizing innovation to promote their social and economic development goals and are actively seeking to improve their innovation performance. In general, innovation is flourishing globally.

How is modern-day innovation policy changing?

A few years ago, innovation and innovation policies were still the reserve of high-income economies. Today, developed and developing economies – including those with an abundance of natural resources – have placed innovation firmly on their agenda to boost economic and social development. Economies at all development levels now ask questions about how to instill the curiosity of science and entrepreneurship in children and students, how to make public research more relevant to business, how to foster business innovation, and how to make intellectual property work for local innovation.

There is also a better understanding that innovation is taking place in all realms of the economy, including sectors traditionally classified as low-tech. As previous GII editions have shown, countries are well-advised to see the potential for innovation in all economic sectors, including agriculture, food, energy, and tourism. This entails dispelling the myth that innovation is solely concerned with science-driven, high-tech outputs.

Consequently, modern-day innovation policy reveals a number of important trends. First, innovation policy is invoked not only in relation to economic objectives related to growth and technological change, but also to cope with modern societal challenges, such as food security, environment, energy transitions, and health. Second, on the organizational front, innovation policies have moved from the reserve of a single ministry or policy agency – usually the Science Ministry – to cross-ministerial task forces or various ministries, often with the attention of high-level policymakers, such as the Prime Minister's office. Third, data-based evidence and innovation metrics such as the GII are increasingly at the center of crafting, deploying, and evaluating innovation policies.

Why the focus on medical innovation?

Over the last century, improvements in healthcare have, on average, resulted in a doubling of life expectancy in all economies, helping to expand the global workforce, drive economic growth and improve the quality of life of many. However, many people still lack access to quality healthcare. Medical innovation (both technical and non-technical) is central to delivering high quality and affordable healthcare for all, a priority shared by all governments. The health sector is one of the most important investors in



GLOBAL INNOVATION INDEX 2019

Creating Healthy Lives—The Future of Medical Innovation

innovation, second only to the information technology (IT) sector. Health R&D represents a significant proportion of annual private and public R&D expenditures in all countries and, by 2020, global health expenditures are expected to rise to around USD 9 trillion.

Are there any notable patenting trends in the healthcare sector?

Medical innovation is thriving. GII 2019 reveals that medical technology is now one of the top five fastest growing technology fields (the four others are IT-related). Patenting rates are also high in fields such as pharmaceuticals and biotechnology.

Actual levels of medical innovation, however, are likely to be much higher than patenting statistics suggest because a lot of health-related R&D and patenting is happening in fields like electrical and mechanical engineering, instruments, chemistry and information and communications technologies (ICTs), including artificial intelligence (AI). Many IT-led innovations are enabling process and organizational innovations within the sector and generating operational efficiencies, reducing health care costs and producing better health outcomes.

So, does the sector have a bright future?

Yes. There is a lot of optimism about upcoming health innovations, and their possible impact, which is impressive. Innovations at many different levels are making it possible for more and more people to enjoy better healthcare and improved health.

While most R&D-intensive health firms remain concentrated in Europe and the USA, GII 2019 shows that larger emerging economies, like China and India, and smaller ones, like Indonesia, Mexico, Nigeria, South Africa and Viet Nam, are progressively making their mark on the global health landscape.

While there has been a slowdown in pharmaceutical research productivity in recent decades, innovation is flourishing in other increasingly health-related sectors, such as medical technologies, IT and software applications. For example, over the last five years, regulatory agencies have approved a record number of new medical devices – heart valves, digital health technologies and 3D printing devices.

But caution is needed in mapping how quickly medical innovations come about. The complex nature of health innovation ecosystems tends to slow the deployment of health-related innovation. And many obstacles still need to be overcome, not least the persistent gaps in access to quality healthcare in many middle and low-income countries, and the need to make healthcare more affordable everywhere.

How is the health innovation landscape changing?

We are seeing a convergence of digital and biological technologies, which is creating huge opportunities to improve healthcare systems at many levels. GII 2019 underlines the transformative power of IT-led innovation within the sector. Rapid advances in digital technology and AI, in particular, promise to enrich global healthcare and are driving and reshaping its evolution, prompting a shift from the traditional “react and revive” approach, which helps sick people recover, towards a “predict and prevent” approach that helps people stay healthy. Health-related technologies and organizational innovations have the potential to lower health costs and improve overall healthcare efficiency and quality. These new technologies will transform patient-doctor interactions, diagnoses, treatments and how disease prevention is handled. Greater automation of health systems will improve the flow of information among health providers, enabling a better assessment of the impact medical technologies and pharmaceutical inventions

have on patients. AI, big data and machine learning also promise to speed up drug discovery and the development of more precise and affordable diagnostic tools and treatments.

Harnessing these benefits, however, will require the development of infrastructure and policies that enable effective integration and management of data across the healthcare ecosystem and efficient and safe data collection management and sharing processes.

Are there opportunities for emerging economies to improve their healthcare systems?

Developing countries face many of the same constraints as developed countries but may have access to opportunities that developed countries lack. New health technology applications in the field of telemedicine, real-time diagnostics tools and establishment of electronic health records in India and China, for example, are indicative of this. These technologies offer developing countries opportunities to leapfrog existing health systems and to embrace alternative operating and financing models and legal frameworks that were not previously available to them. In so doing, there are opportunities to deploy new health solutions more rapidly with immediate impact without the need to scale-up healthcare facilities and professionals proportionately.

Many medical innovations, such as 3D printing or medical diagnostics for malaria, are relevant to developing countries, as are organizational innovations that enable improved health screening, as seen in Egypt, or the use of remote telemedicine applications, as seen in Rwanda. Such innovations offer unique opportunities for emerging markets to scale-up access to affordable, quality healthcare, even for patients in the remotest regions. China and India stand out as notable examples of countries that are actively embracing IT-led innovations in their healthcare systems.

Many so-called “frugal” or “adapted” medical innovations are also having considerable impact in low-resource contexts. For example, clean delivery kits that allow doctors in low-resource contexts to deliver babies more safely.

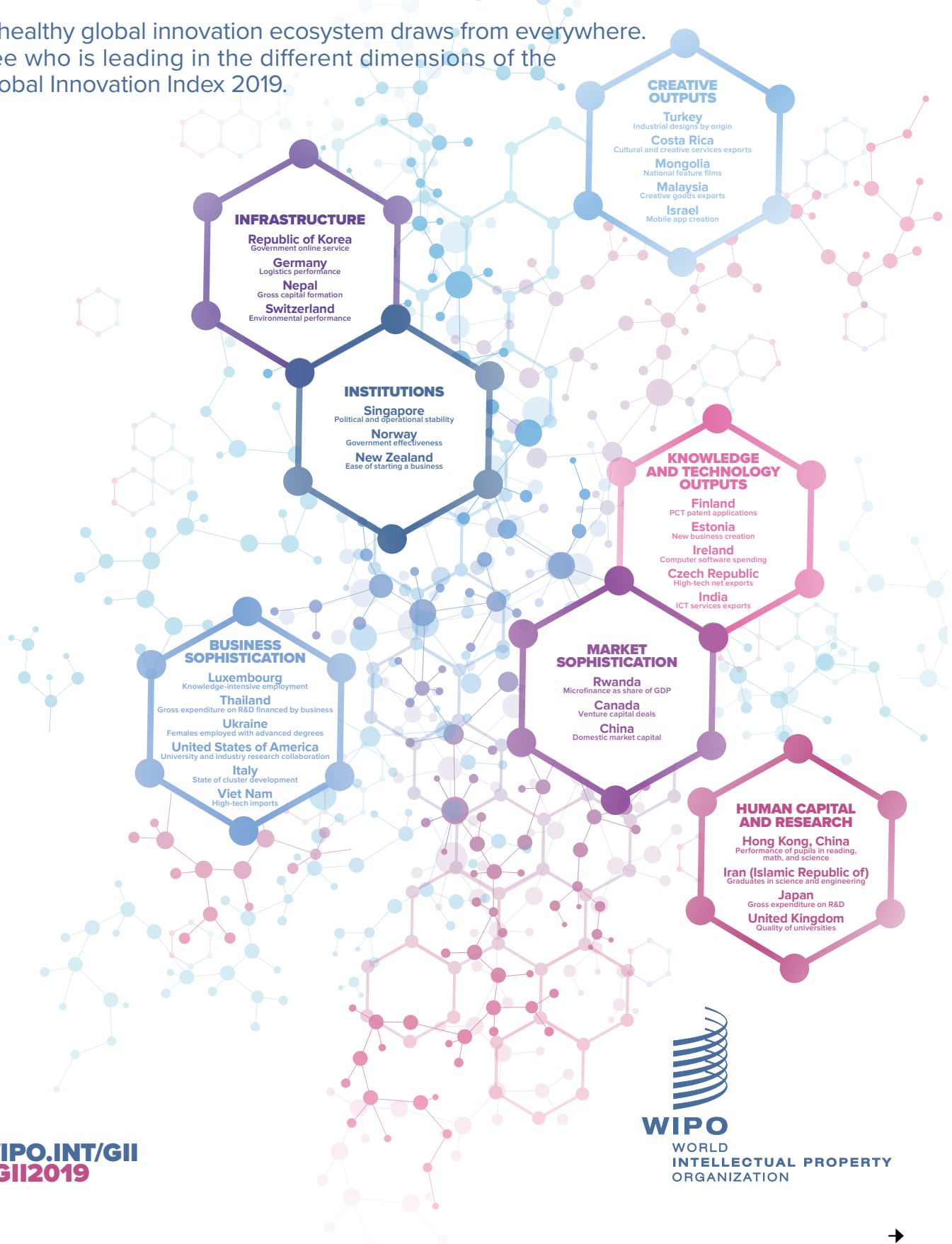
Why is the diffusion of medical innovations difficult?

Moving medical innovations from the “bench to the bedside” can take decades. Many different actors are involved and the whole process takes place within a policy and regulatory framework shaped by government or regulators to ensure patient safety and access. Legacy healthcare systems typically work in silos and have inefficient and poorly developed systems and standards to exchange medical data, making them operationally inefficient.

Speeding up the diffusion of existing medical innovations to developing countries would make a huge difference. Medical technologies specifically adapted for low-resource settings are also required. Although the reality is that market forces continue to shape pharmaceutical R&D activities, which target diseases that prevail in high-income

THRIVING WITH INNOVATION 2019

A healthy global innovation ecosystem draws from everywhere. See who is leading in the different dimensions of the Global Innovation Index 2019.



countries, there are opportunities for developing countries to advance health coverage by investing in improving the functioning of their health systems. The experiences of Egypt and India outlined in GII 2019 offer useful lessons in this regard.

What medical breakthroughs are on the horizon?

Many exciting medical advances are in view. A better understanding of how individual human cells function promises breakthroughs in the diagnosis and treatment of many autoimmune diseases and cancer. Advances in brain research will improve diagnosis of neurological conditions and enable breakthroughs in treating Alzheimer's and spinal cord injuries. We can also anticipate better pain management techniques and advances in regenerative medicine (imagine a biological replacement pancreas using a patient's own cells!). Advances in immunotherapy will offer hope to millions of cancer patients. New, safer and more effective vaccines are on the radar and the promise of gene editing to cure disease will soon begin to bear fruit. Advances in the application and use of data science will foster important new insights to support personalized or precision medicine. Virtual modeling and AI techniques will transform medical research, facilitating medical breakthroughs and innovation. Healthcare delivery will also improve. IT-led innovations, including AI and big data, will help overcome inefficiencies linked with legacy health systems, and will also allow health monitoring in real time, remote tracking of conditions, and data analysis and sharing for earlier, more precise diagnoses and personalized treatments.

New technologies, and their associated costs, will bring new possibilities as well as new risks and uncertainties. Some, such as genetic engineering, will also challenge current ethics and societal values. Others will raise issues of equity and access. New decision-making structures will need to address these issues. Care is also required to ensure these new advances do not exacerbate existing healthcare gaps. The future of medical innovation and its impact on global health will depend crucially on national and global actors creating the policies and institutions to support medical research and innovation.

Curbing cultural appropriation in the fashion industry with intellectual property

By **Brigitte Vézina**, Intellectual property and cultural heritage law consultant, The Hague, Netherlands

In the face of public uproar following countless accusations of cultural appropriation, the fashion industry is due to undergo a profound transformation. The world over, calls are being made for fashion designers to be mindful when borrowing from other cultures and to offer products that are respectful of their traditions. While the term “cultural appropriation” is shrouded in uncertainty, there is undoubtedly a role for intellectual property (IP) in curbing this harmful practice.

“Cultural appropriation” is a murky concept. It can be described as the act by a member of a relatively dominant culture of taking a traditional cultural expression and repurposing it in a different context, without authorization, acknowledgement and/or compensation, in a way that causes harm to the traditional cultural expression holder(s).

A CULTURE OF COPYING IN FASHION

Many instances of cultural appropriation can be explained, at least in part, by the fact that copying is so pervasive in the global fashion industry. While fashion design is marked by an astonishing level of creativity, imitation remains a major driver of the conceptualization process. Many commentators refer to this as the “piracy paradox,” in which fast-paced copying ensures renewed consumer



Photo: Courtesy of Marta Hewson / Angela DeMontigny

Fashion designers have been borrowing stylistic elements from other cultures for centuries, and today, the appeal of traditional designs with an “ethnic” flair is as strong as ever. Jacket designed by Indigenous fashion designer, Angela DeMontigny.

The world over, fashion designers are being called upon to be respectful of the traditions of other cultures when they borrow from them. Unfortunately, designers sometimes take traditional cultural expressions, such as the traditional Samoan male tattoo called *pe'a* (below), and reuse them out of context in ways that disregard or misinterpret their cultural significance and thereby cause great harm to the holders of these expressions.



Photo: Alamy Stock Photo / © Horizons WWP / TRVL

demand for ever-changing designs. With new trends quickly trickling down from high-fashion to fast-fashion, designers tend to embrace a multicultural vision and resort to exploring an increasingly diverse range of cultural influences to come up with a stream of fresh and novel styles.

This is nothing new. Fashion designers have been borrowing stylistic elements from other cultures for centuries. Foreign influences on European fashion can be traced from the late Middle Ages. The development of trade with the Americas and Asia, notably via the Silk Road, brought refined fabrics and new-fangled clothing styles to wealthy merchants across the Old Continent. Fast forward to the early 1990s and designers are working up an appetite for all things traditional, ethnic or folkloric, incorporating patterns and motifs from Indigenous cultures into their creations. Today, the appeal of traditional designs is as strong as ever. The pages of fashion magazines are awash with clothing and accessories bearing a distinctively “ethnic” flair.

WHEN DRAWING INSPIRATION CAUSES HARM

Unfortunately, designers sometimes take traditional cultural expressions and reuse them out of context in ways that disregard or misinterpret their cultural significance and thereby cause great harm to the holders of these expressions. Even where harm is unintentional, it can have drastic cultural, social and economic consequences. For example, in 2013, American sportswear company Nike printed patterns from the traditional Samoan male tattoo called *pe'a* on women’s workout leggings. Following a public outcry denouncing the disparaging and offensive use of *pe'a*, Nike withdrew the leggings from sale and officially apologized. More recently, in May 2019, Nike’s announcement to sell special edition “Air Force 1 Puerto Rico” sneakers adorned with *mola* patterns originating in the Guna culture of Panama (and wrongly attributed by Nike to Puerto Rican culture), was fiercely opposed by representatives of the Guna people. Once again, this led to Nike cancelling the launch of the sports shoes.

In truth, much traditional clothing is not simply functional or ornamental but is infused with meaning and is part of the identity of the Indigenous communities that use it. That is why copying designs without consideration for their underlying cultural significance can erode the identity of

a whole community. Further, cultural appropriation often occurs as the backwash of colonization, and contributes to widening existing divisions and perpetuating patterns of historic dispossession and oppression. In addition, for many Indigenous peoples and local communities, making traditional clothes is a source of income; as such, cultural appropriation can wield a significant economic blow, undercutting the ability of communities to earn a living by displacing the sale of authentic products. For instance, in 2015, UK fashion label KTZ copied a traditional Inuit parka design onto a men's sweater with a hefty price tag of over USD 700. After protest, KTZ removed the sweater from sale and apologized for the unintended offense, but did not offer any monetary compensation to the Inuit community that had developed the traditional parka design.

A COMPLEX POLICY AND LEGAL CONTEXT

Cultural appropriation sparks passionate debate because it arises in a tangle of multifarious policy and legal issues. To start, not all forms of cultural borrowing are undesirable. In multicultural societies, it is important to safeguard the principle of freedom of expression and not to hinder innocuous cultural exchanges and interactions. Therefore, curbing cultural appropriation in fashion does not amount to a total and un-nuanced restriction on all uses of traditional cultural expressions. A diversity of cultural influences is what makes fashion evolve and thrive, and a respectful interpretation of the world's cultures can allow all cultures to mutually enrich themselves and bring about genuine benefits to society.

To add to the complexity, cultural appropriation is not universally defined by law and hovers in a gray zone where permissible inspiration slips into harmful appropriation. The concepts of misuse or misappropriation at the heart of the WIPO's program of work on IP and traditional cultural expressions, which include the WIPO Intergovernmental Committee (IGC) negotiations on the protection of traditional cultural expressions, may or may not overlap with what is understood by "cultural appropriation," depending on the scope of protection that WIPO's member states may determine. Until that point, a great deal needs to be done to raise awareness among fashion designers and the general public to demystify the concept and to alert them to the harm that cultural appropriation can cause.



Photo: Alamy Stock Photo / © Ida Pap



Photo: Alamy Stock Photo / © Rigo Rodriguez

Much traditional clothing, such as the clothing of the Guna culture of Panama (above), is infused with meaning and is part of the identity of the Indigenous communities that use it. For many of these communities, making traditional clothes is a source of income; as such, cultural appropriation can undercut the ability of communities to earn a living by displacing the sale of authentic products.



INDIGENOUS LUXURY.



DE MONTIGNY

CANADA

@demontignyboutiquegallery

Indigenous fashion designers, such as Cree-Métis designer Angela DeMontigny, can be the most powerful voice for their own cultures. Their contemporary creations present an authentic vision of their traditional cultural expressions and cultural heritage.

IP PROTECTION FOR TRADITIONAL CULTURAL EXPRESSIONS

Cultural appropriation is undoubtedly related to the fact that traditional cultural expressions maintain a jarring relationship with the international IP system. In the main, existing IP laws exclude traditional cultural expressions from protection and relegate them to the public domain, making them vulnerable to appropriation and undermining the customary laws and rules that regulate access to and use of them in a customary context. The WIPO document *The Protection of Traditional Cultural Expressions: Updated Draft Gap Analysis* offers a detailed examination of the shortcomings of IP law, particularly copyright, in effectively preventing the appropriation of traditional cultural expressions.

Putting an end to cultural appropriation in fashion therefore requires a thorough examination of how IP law can be improved to better respond to the needs of the holders of traditional cultural expressions in terms of how their culture is represented by fashion designers. Against the backdrop of the United Nations Declaration on the Rights of Indigenous Peoples (Article 31), the international IP landscape could be reshaped to afford Indigenous peoples the legal means to exercise effective control over their traditional cultural expressions. The WIPO IGC is currently negotiating an international legal instrument to provide balanced and effective IP protection for traditional cultural expressions. Given the lack of respect and acknowledgment and the distortion of cultural meaning evident in cultural appropriation, extending moral rights to traditional cultural expressions is one avenue on which WIPO's member states might focus.

FOUR PRINCIPLES FOR A NON-APPROPRIATING BEHAVIOR

Working within the present legal framework, fashion designers can engage with other cultures and use traditional cultural expressions without falling into the cultural appropriation trap by following four principles:

1. Understanding and respect for the holders of traditional cultural expressions.
2. Respectful transformation and reinterpretation of traditional cultural expressions.
3. Acknowledgement and recognition of the holders of traditional cultural expressions.
4. Engagement with the holders of traditional cultural expressions through requests for authorization and collaborative partnerships.

Examples of designers actively collaborating with holders of traditional cultural expressions are numerous. The Cruise 2020 collection presented by the French haute-couture house of Christian Dior in Marrakesh in April 2019, is a reflection of the growing awareness in fashion circles of the importance of respecting the world's diverse cultures, but also demonstrates how the complexity surrounding cultural appropriation causes change to occur very gradually. The collection honored the creativity and skill of African creators of wax print fabrics made by Uniwax, a company based in Abidjan, Ivory Coast, one of the few fabric manufacturers still using traditional methods. The story of wax fabric is in itself a cultural voyage: while it is nowadays associated with and is emblematic of Africa, its origins are found in Indonesian batik brought to Africa many centuries ago by Dutch merchants. Dior designer Maria Grazia Chiuri told the press that the collection "proposed a dialogue between the Dior wardrobe and African fashion" and was her way of actively supporting African fashion and the tradition of wax fabric, which is under threat from cheap, digitally-produced copies.

Another illustration of such a dialogue between cultures is that of Canadian winter-clothing manufacturer Canada Goose. In January 2019, it launched a collection of exclusive parkas as part of its Project Atigi collection (Atigi means “caribou parka with fur inside” in Inuktitut, the language of the Inuit). The collection features the designs of one-of-a-kind traditional parkas from fourteen Inuit seamstresses from nine communities across the four Inuit regions – Inuvialuit, Nunatsiavut, Nunavut, and Nunavik. The bespoke parkas are unique and made using traditional skills and designs combined with modern Canada Goose materials. The proceeds are intended to benefit the national Inuit representational organization Inuit Tapiriit Kanatami.

SUPPORTING INDIGENOUS DESIGNERS

Indigenous fashion designers can be the most powerful voice for their own cultures insofar as they present an authentic vision of their traditional cultural expressions through their contemporary creations. Cree-Métis designer Angela DeMontigny, for instance, creates modern fashion that celebrates her traditions and cultural heritage. Several IP tools are available to support Indigenous fashion creators’ tradition-based business endeavors. The WIPO publication *Protect and Promote Your Culture: A Practical Guide to Intellectual Property for Indigenous Peoples and Local Communities* is an example of such practical initiatives and aims to empower holders of traditional cultural expressions in harnessing IP for the benefit of their culture.

The present article is drawn from the paper entitled *Curbing Cultural Appropriation in the Fashion Industry*, written by Brigitte Vézina and published by the Centre for International Governance Innovation (April 2019).

Singapore's biggest copyright reform in 30 years

By **Gavin Foo**, Senior Legal Counsel, and **Edmund Chew**, Legal Counsel, Intellectual Property Office of Singapore



Photo: iStock / Getty Images Plus / © Chinnapong

Singapore is currently undertaking the most comprehensive review of its copyright regime in 30 years. In this process, policymakers have been challenged to find solutions that fairly accommodate the concerns of an increasingly varied group of stakeholders who have yet more varied interests and perspectives.

Copyright in the 21st century is much like the novelist Julian Barnes described art in *The Noise of Time* (2016):

“Art belongs to everybody and nobody. Art belongs to all time and no time. Art belongs to those who create it and those who savour it. Art no more belongs to the People and the Party, than it once belonged to the aristocracy and the patron. Art is the whisper of history, heard above the noise of time. Art does not exist for art’s sake: it exists for people’s sake. But which people, and who defines them?”

For whom does copyright exist? This question underlies virtually all law reform efforts in the field. In today’s

complex normative landscape, where the only constant is technological and market change, policymakers are challenged to find solutions that fairly accommodate the concerns of an increasingly varied group of stakeholders who have yet more varied interests and perspectives. Prior to the enactment of the Singapore Copyright Act in 1987, the Parliamentary Select Committee considered 34 written representations on the draft Bill. Now, as Singapore undergoes the most comprehensive review of its copyright regime in 30 years, the total number of submissions has increased more than tenfold. Before arriving at the Singapore Government’s latest recommendations on 16 issues affecting copyright in the digital age, the Ministry of Law and the Intellectual



Singapore's proposed new collective management system is designed to inspire public confidence, encourage greater use of the system and ensure collective benefit.

Property Office of Singapore (IPOS) considered 94 formal written submissions and 283 online feedback forms. This huge increase in feedback reflects the growing complexity of the copyright landscape in the digital age.

The recently published Singapore Copyright Review Report outlines these recommendations, including proposed changes to the Copyright Act. The changes are wide-ranging. They cover new rights, new exceptions, new enforcement mechanisms, and a proposed new government-administered licensing framework for collective management. Myriad stakeholders will benefit as a result – individual authors, businesses, employers, users, intermediaries, students, researchers, and more; the reforms will benefit each of them to varying degrees. For one group of stakeholders in particular – members of the public – the changes will improve their everyday dealings with copyright. These stakeholders

create, access, consume, and distribute content relentlessly, at work and at play, privately and publicly, and form the bedrock of any copyright system.

A MORE ACCESSIBLE COPYRIGHT LAW FOR EVERYONE

For a start, the reforms will involve restructuring all existing provisions of the Copyright Act and recasting them in plain English. This is a substantial undertaking. The Copyright Act is Singapore's most complex piece of intellectual property legislation; it consists of around 350 printed pages and comprises more than 272 sections across 17 Parts and 36 Divisions. The Act generally embodies legislative drafting practices and statutory language that are more than 30 years old. Most of its provisions have not been amended since they were first enacted.



Photo: Alamy Stock Photo / © Jon Hicks

As the term suggests, “restructuring” entails improving the organization and flow of the Act. For example, it will involve streamlining certain provisions that have been fragmented and duplicated as a result of early efforts to hardwire into the structure of the Act the traditional distinction between original works produced by an author and other subject matter (such as sound-recordings, cinematograph films and broadcasts). As a consequence, provisions on copyright subsistence, duration and ownership are contained in one part of the Act for original works produced by an author, and repeated in another part for other subject matter. Likewise, certain exceptions, such as fair dealing, are contained in separate provisions in different parts of the legislation even though the provisions essentially relate to the same exception.

Navigating the 1987 Copyright Act and understanding its provisions can be challenging even for those who are legally trained, and certainly more so for members of the public. By restructuring the Act and rewriting it in plain English, all stakeholders will gain access to provisions that are readily understandable and arranged in a logical, intuitive and user-friendly manner. This will ensure that members of the public are better placed to observe and apply Singapore’s copyright laws. At the very least, parties appearing in court for an Internet site-blocking order will no longer have to cite unwieldy references to key provisions – such as section 193DDA(2)(a) of the Act – an inconvenient consequence of the many piecemeal legislative amendments over the years, which will also be cleaned up in the process.

Beyond these stylistic amendments, Singapore’s copyright review also proposes substantive amendments where the beneficiaries include members of the public. Two such amendments are described below.

MINING THE NEW DATA ANALYSIS EXCEPTION TO BENEFIT SOCIETY AS A WHOLE

The world is on the cusp of sweeping technological and market changes that are said to herald the fourth industrial revolution. At its core is data – a commodity that many have described as the new oil of the digital economy. Data fuels seemingly infinite applications across every industry and sector; insights gained from data analyses are widely recognized to generate substantial savings in time and cost and empower businesses to make proactive, knowledge-driven decisions. Known applications of data analysis – such as predicting disease outbreaks by mining news archives – are only beginning to scratch the surface of the social good that may be achieved from such activities.

Against this backdrop, it is no surprise that an exception to copyright law for data analysis, often referred to as a “text and data mining” exception, has garnered increasing interest and support from many jurisdictions around the world, including Australia, the European Union, Japan, the United Kingdom and now, Singapore. Essentially, such an exception serves to exempt from copyright law acts of reproduction that are performed in the course of text and data mining, which typically involves using automated techniques to copy large quantities of material, extract data from the material, and analyze the data to glean new insights and information. Without an exception, such acts may risk infringing copyright whenever the material is copied, which in turn, produces a chilling effect on text and data mining activities.

Singapore’s version of the exception is calibrated to recognize the realities of such activities and to create a safe space for them to flourish without unfairly compromising rights holders’ interests. As proposed in the Copyright Review Report (paras. 2.8.5 and 2.8.6.), the exception will allow copying of copyrighted works for the purpose of data analysis and will cover both non-commercial and commercial activities. However, the exception will not apply where no analysis is performed on the works that have been copied. Furthermore, users must have lawful access to the works (such as through a

paid subscription to the relevant databases) and will be prohibited from distributing the works to anyone without such access. Rights holders will be entitled to implement reasonable measures to maintain the security and stability of their computer systems and networks.

Considering the essential role of data in the digital economy, the data analysis exception is no ordinary exception. Having implications far beyond the realm of copyright, the implementation of this proposed exception would support the very creation and dissemination of knowledge for the benefit of Singaporean society. The true beneficiaries of the exception are not its users but the citizens of an economy powered by digital innovation, whose daily lives will be improved in aspects as diverse as education, healthcare, business, financial services and transportation.

COLLECTIVE MANAGEMENT FOR THE COLLECTIVE BENEFIT

Collective management of copyrighted works is crucial to the success of any copyright regime. Such infrastructure gives users simple, cost-effective access to works and offers creators broad access to markets without having to individually negotiate and license their works. Much of this, however, is contingent on having a well-functioning collective management ecosystem that upholds high standards of transparency, good governance, accountability and efficiency. That is the aspiration of Singapore's newly proposed collective management licensing scheme.

The new scheme was devised with the benefit of feedback from a public consultation in 2017, which was dedicated to the concerns of collective management organizations (CMOs), creators and users in Singapore. It will regulate a previously unregulated space by way of a class licensing scheme administered by IPOS (Copyright Review Report, para 2.15.7). Entities carrying out collective licensing activities in Singapore will fall within the regulated "class" and will be subject automatically to the associated licensing conditions and a mandatory code of conduct. Regulation will be measured and "light-touch" in nature. This means that CMOs will be able to perform collective licensing activities without being required to register with IPOS to do so. Moreover, IPOS will not intervene to set tariff rates or approve license fees but will have the necessary powers to ensure CMOs comply with the licensing conditions and the code of conduct.

The licensing conditions and the code of conduct are the linchpins of the new licensing scheme. Their contours will be shaped by the collective wisdom embodied in the legislation, regulations and codes of conduct compiled in the *WIPO Good Practice Toolkit for CMOs* (Toolkit). Published in October 2018 by WIPO and based on the input received from WIPO member states and other stakeholders, the Toolkit is a working document that compiles examples of CMO legislation and regulations from 30 jurisdictions and six codes of conduct of national and international CMOs. These are distilled into examples of good practices on a range of issues, including members' rights, the relationship between CMOs and users, CMO governance, and dispute resolution. While the Toolkit is not a binding document, it will serve as a helpful starting point for Singapore to develop its own licensing conditions and code of conduct in close consultation with stakeholders.

Singapore has collective management in several key areas including music, sound recordings, film and print materials, and as such, the proposed new changes are expected to be pervasive. Every day, often unknowingly, citizens come into contact

with works that are managed collectively – in schools, restaurants and shopping malls, at concerts, weddings and other functions. A light-touch licensing scheme means that the higher operational costs associated with regulatory compliance are not passed on to them. More importantly, the proposed new scheme will hold CMOs to higher standards of transparency, good governance, accountability and efficiency and will thereby inspire public confidence in the collective management ecosystem and improve ease of access to works administered by CMOs. In turn, users will be more likely to take up collective licensing solutions and creators will receive additional incentives to create (and license) more works for the enjoyment and education of society.

FROM RECOMMENDATIONS TO REGULATIONS

Many stakeholders will benefit from the suite of proposed changes to Singapore's copyright regime, not least members of the public. With the policy recommendations already in place, the next phase of Singapore's copyright review – drafting the legislative amendments to implement these changes – is well underway. A consultation on the CMO licensing conditions and code of conduct is expected to begin in the second half of 2019, followed, in due course, by a public consultation on the new draft copyright bill – restructured, rewritten and reinvigorated to address the demands of the digital age and serve the needs of many.

The proposed copyright reforms encompass wide-ranging changes that promise to make the copyright system more accessible for everyone. They include new rights, new exceptions, new enforcement mechanisms, and a proposed new government-administered licensing framework for collective management.



Photo: Getty Images / E+ / © recep-bg

The harsh reality of life as a musician: an interview with Miranda Mulholland

By **Catherine Jewell**,
Publications Division, WIPO

Award-winning Canadian musician, record-label owner and festival founder Miranda Mulholland offers a personal account of the realities that artists are facing in the digital era.

What challenges are artists like you facing?

These days, even professionally accomplished musicians are struggling financially. At first, I thought I was alone in this, but when I gave a speech to executives from the Canadian music industry, government officials, lawyers, policymakers and other professional musicians, I realized this was a common challenge. As I spoke of my professional accomplishments and my personal financial struggles, there were nods from the musicians in the audience. Today, artists like me have to spend huge amounts of time updating, marketing, posting, reporting, engaging and connecting. This limits our creative time, and drains our energy and confidence, making it difficult for us to earn a living from our music. Indeed, many (too many) feel being a professional artist is no longer a viable career.

In this age of social media gloss, the shameful reality of a working musician in the digital marketplace is a dirty secret. Being honest about the challenges I face and learning that the peers I admire share the same difficulties was one of the most validating moments of my life. I learned that it wasn't just me, the situation was affecting all of us. It was also hurting independent labels, major labels, artist entrepreneurs, journalists, writers and more. What many call the "value gap" was putting the entire ecosystem at risk. In fact, an entire creative middle class is under threat.

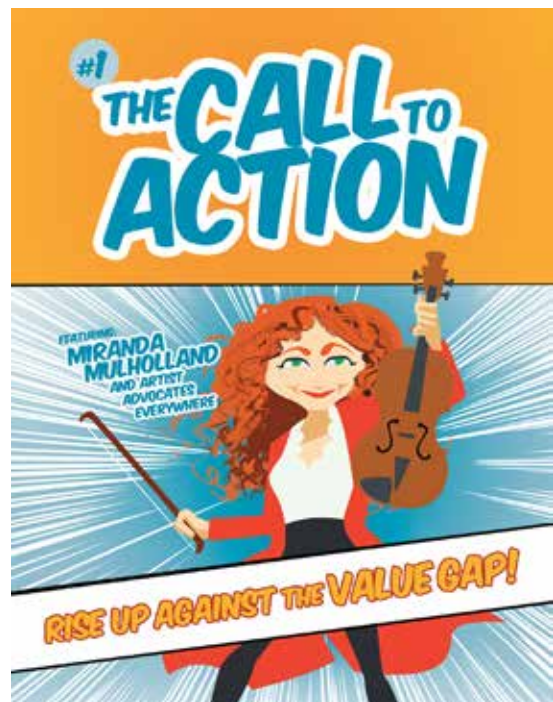


Photo: Courtesy of Miranda Mulholland

What lies at the core of the problem?

Although the music market is showing signs of recovery, the revenues that are being returned to artists are at an all-time low. We just aren't earning enough to pay our bills. There is a huge disparity between the value of creative content that is being consumed and the remuneration received by the artists who create it.

Technology companies tell musicians that if we are not making a living from our work, it is because we are not good enough, or we are not doing it right. They simply blame the victim. However, the fact is our work is good enough; it is the commercial framework in which we operate that is unfair and broken. Overly broad safe harbor provisions are one of the root causes of the problem. These online liability laws, which originally were designed to support the growth of online platforms, are now being (mis)-used by some digital services to avoid licensing music on fair terms. This means that artists across the creative community do not get a fair return for their work. In turn, this limits our capacity to earn a living, and to create and record new music. Ultimately, that affects consumers too.

Is it not just a question of adapting to the digital economy?

You could say we just have to adapt – in fact, that is what the tech companies do say – and that is true. We have adapted and we continue to adapt. We stretch ourselves, adopt social media strategies, and cut through the noise, but we are facing a real and identifiable adversary that is devaluing all we do and taking away any leverage we have to work within a functioning marketplace. The policies that allow this adversary to get away with this are older than the adversary itself. These policies need updating. Musicians don't create an obsolete product – we aren't buggy whip-makers in the 1920s – there has never been more music than there is today, and it has never been more accessible or popular. It has value, but giant technology companies are using that value to mine consumer data and to line their pockets. YouTube pays one twentieth of what Spotify pays creators because of safe harbor laws. YouTube is also vacuuming up all the data it can about consumer preferences, age, income, and more. In the digital world, if something is free for you as a consumer, you are the commodity. YOU are what is being sold.

An incredible book by Deborah Spar called *Ruling the Waves* turns to history to show us that innovation always creates waves of commerce and chaos, followed by monopoly, and then, finally, implemented rules and regulations. Think of the printing press, maps, the compass, radio, television – all, like the Wild West of the Internet, follow the same pattern. Another excellent book, Jonathan Taplin's *Move Fast and Break Things* describes how, unlike its democratizing promise, the Internet has hindered rather than helped those trying to make a living in the arts. These books, along with Music Canada's Value Gap report released in 2017, were a revelation to me.

So, it's the framework that is broken?

Yes, learning about the "value gap" and its causes affirmed that my own self-worth as a musician, or any lack of hard work and dedication to my craft, were not the problem. I had never enjoyed the same revenues as colleagues with the same credentials who entered the industry before me, but that wasn't because of a lack of skill or talent on my part, it was because the framework is broken. This discovery has lifted a huge weight of self-doubt and shame and has encouraged me to search for solutions, and to unite with others in doing so.

Are artists making progress in ensuring their voices are heard?

Since it dawned on me that it's the framework that is broken, I have spoken about my own personal experience in many international fora and am struck by the giant sea change in views on this issue since I first started talking about it. Gone is the cynicism towards creators; gone is the belief that if artists aren't thriving it is their fault. We are living in a post-Cambridge Analytica

THE PROBLEM:

EVERYONE IS THINKING: MAYBE I'M NOT GOOD ENOUGH.

MUSIC IS AVAILABLE EVERYWHERE, AND WE HAVE ADAPTED TO THE NEW DIGITAL PROMOTIONS WORLD OF SOCIAL MEDIA BUT WE DON'T HAVE TIME TO DO ACTUAL CREATING ...

THINGS ARE TERRIBLE FOR CREATORS. REMUNERATION IS AT AN ALL TIME LOW. SOME ARE QUITTING MUSIC.

PEOPLE LOVE OUR MUSIC, AND WE JUST GOT A GREAT REVIEW. BUT IT JUST IS NOT PAYING OUR BILLS.

I'VE WON AWARDS AND CAN'T PAY MY RENT.

WHY AM I SURROUNDING MY TECH?

I'M A SINGLE PARENT AND CAN'T TOUR.

YOUTUBE PAYS ONE-TWENTYETH OF THE OTHER STREAMING SERVICES.

ANY ROYALTY CHECKS I BOUGHT A COFFEE.

THE MUSEUM MIDDLE CLASS IS GONE.

EVERYONE SAYS TOURING IS THE ANSWER BUT EVERYONE IS ON THE ROAD.

I HAVE TO QUIT MUSIC.

THE RESEARCH:

THE VALUE GAP

ALWAYS BY P.M. SHELLEY

CULTURE CRASH SCOTT TARRANT

RULING THE WAVES INEBORA BEAR

MOVE FAST AND BREAK THINGS JAVIER

REALIZATION:

THE FRAMEWORK IS **BROKEN!**

THE **VALUE GAP** IS THE DISPARITY BETWEEN THE VALUE OF CREATIVE CONTENT BEING CONSUMED AND THE REVENUES RETURNED TO THE CREATORS.

THIS IS AFFECTING EVERYONE ACROSS THE CREATIVE COMMUNITY.

AMPLIFICATION:

RECOGNIZING THE **VALUE GAP** AS THE SOURCE OF THE PROBLEM,

MIRANDA BEGINS TALKING TO FELLOW CREATORS FROM AROUND THE WORLD,

SPEAKING AT MIDEM, THE WTO, AND THE ECONOMIC CLUB OF CANADA

THE FRAMEWORK IS UNFAIR

COPYRIGHT EXCEPTIONS

WE ARE GOOD ENOUGH

BUT WE ARE SURROUNDING BILLIONAIRES

THE VALUE GAP IS AFFECTING ALL TYPES OF CREATORS

Photos: Courtesy of Miranda Mulholland





“Although the music market is showing signs of recovery, the revenues that are being returned to artists are at an all-time low. There is a huge disparity between the value of creative content that is being consumed and the remuneration received by the artists who create it,” says Miranda Mulholland (left).

world, a post-election interference world and both the public and government are rightly suspicious of the way giant technology corporations “move fast and break things.” There is a genuine eagerness on the part of policymakers to understand the day-to-day life of creators, the new challenges we face in the digital world and the steps that government can take to level the playing field.

This is my personal story, but I am not alone. This is a global issue and we have had some significant victories. At home in Canada, during the review of Canada’s copyright law, we have seen publishers, labels, independent artists and independent labels agree on a number of recommendations. This is virtually unprecedented.

In October 2018, the United States House of Representatives passed the bipartisan Music Modernization Act without a single dissenting vote. Many artists, industry representatives and government officials contributed to this historic bill. The way both political parties and representatives from across the music industry came together and unified to make change was truly impressive.

In Europe, in early May 2019, the European Parliament passed a package of amendments to the Copyright Directive marking a significant step toward rebuilding a functioning marketplace that has been almost destroyed by safe harbor legislation dating from the 1990s. And

now, in Canada, the Standing Committee on Canadian Heritage, which studied remuneration models for artists and creative sectors as part of the Copyright Act Review, has issued a forward-looking and creator-focused report and recommendations. The voices of artists resonate throughout that report – and that Committee’s recommendations, if implemented into law, would bring significant and immediate improvements to the lives and businesses of artists and creators.

Is it simply a question of outdated laws?

Much of the legislation the technology companies are exploiting has been around from before you could perform a search on Google. Many of the laws in place today reflect the days of dial up modems, home phones, and buying a CD at a music store instead of today’s world of streaming. For context, after the adoption of the WIPO Internet Treaties in 1996 (see box), it was a full two and a half years before Napster appeared. It was four and a half years before Apple launched the iPod, six years before the advent of the Blackberry smartphone, eight years before the first video was uploaded to YouTube and over a decade before the first song was streamed on Spotify.

But there is nothing wrong with the Internet Treaties in themselves. Where things went wrong was the manner in which many countries chose to implement them. The

WIPO treaties set out with all good intentions but there is always wiggle room and interpretation when it comes to their implementation. This is a slippery slope and can put creators' rights in jeopardy.

Are you optimistic about the future?

The unification of voices for change – most recently in Canada, the USA and Europe – gives me hope. The lessons from history about the process of the rebalancing and regulation that takes place after upheaval gives me hope. We have turned a corner and the momentum is growing. We are undergoing an awakening. There is a global realization that free is not free. There is a global movement to preserve arts and culture, the very thing we leave behind as a civilization to say, “we were here.” Our global language of music unites us.

Creators of music, literature, and visual arts have been at the forefront of every revolution in which people have fought to improve their lives. Music has provided the soundtrack for human rights movements around the world. Musicians have been there advocating through music for civil rights, democracy, peace, the right to vote, birth control, the environment and other important causes. We have been there for you. Now we need your help.

Everyone has a part to play in rebalancing the ledger for the creators. For musicians, it means being honest about the situation despite the pressure of social media to create the perception of success. It means supporting strong copyright law and empowering artist colleagues to speak out and do the same.

What can consumers do to support your journey?

Anyone who cares about music can make informed decisions about how to stream music responsibly and in a way that benefits the musicians but also protects your valuable data. Subscribe to a music service, buy vinyl and go to concerts.

And the music industry and policymakers?

To the music industry, I say, continue to use your revenue to re-invest in young creators and diverse voices and continue to use your powerful amplification to encourage growth in all corners of the music ecosystem.

For the policymakers, my message is very clear: end broad safe harbor provisions. Stop subsidizing billionaires who are commercializing the work of others without fair compensation.

My question to readers is – what will you do now?

The WIPO Internet Treaties

The so-called WIPO Internet Treaties, which include the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), set down international norms aimed at preventing unauthorized access to and use of creative works on the Internet and other digital networks. More information about the treaties is available at: www.wipo.int/copyright/en/activities/internet_treaties.html.

With Teqball the world is curved

By Catherine Jewell,
Publications Division, WIPO



Teqbal is a new, ingeniously simple and fun ball game that is taking the world of football by storm. Top football players, clubs and national teams have all caught the teqball bug. It combines the pace of table tennis with the skill and excitement of football.



Teqball, a new, ingeniously simple and fun ball game, is taking the world of football by storm. Football stars, top football clubs and national teams have all caught the teqball bug. Teqball's Gergely Muranyi, talks about the challenges associated with developing this new sport, the role played by intellectual property (IP) in furthering the company's ambitions to promote the sport globally and, ultimately, for it to become an Olympic sport.

What was the inspiration for Teqball?

Teqball, the company, was founded by Gábor Borsányi, Gyuri Gattyán and Viktor Huszár. Gábor, the creative force in the team, came up with the idea when he was a young professional soccer player. When he couldn't get access to a football pitch, he would practice with a friend passing a football across one of the many concrete ping-pong tables found outside residential buildings in Budapest. In later life, he realized that by simply adding a curve to the top of a table, you can create a far more enjoyable game, which we call teqball.

So what exactly is Teqball?

Teqball is the company responsible for developing an innovative sports product that is used for an emerging football-based sport, which professionals and amateurs, including people with disabilities, can play. The game combines the fast pace of table tennis with the skill and excitement of football. One of the great advantages of teqball is that you don't need a team of people to play, you only need a friend. We called it teqball because you need technique to play the game and you play it with a regular soccer ball.

The company was established in 2014 and is based in Budapest, Hungary, where our R&D center is located. We employ around 130 people, up from 38 last year, many of whom are under 30. The company's overriding aim is to create value through the power of sports. That's what drives us.

So is teqball exclusively for soccer?

When we started developing teqball, we were very soccer focused, but in fact, you can play five different games on a Teqball table, namely, teqball, teqis, teqpong, qatch, and teqvoly. For the moment, teqball is the most developed. For example, the different teqball cups we organize are football-focused. In future, we plan to develop the other games into individual sports disciplines and to organize Teq Games where athletes can compete in all Teq sports. That would be a huge event.

Tell us more about the apparatus

The Teqball table is about the size of a table tennis table but has a curved surface and a solid net so the ball bounces back if it hasn't been struck correctly. That means players can only rely on their skill and ability. There's no luck involved in the game. All you need is an opponent at the other end of the table for the game to begin. It is a great way for football enthusiasts to develop their technical skills, concentration and stamina. Teqball is the only training method in the world that gives players such a high level of contact with the ball. That's why footballers are taking it up. Already, quite a number of international soccer players are playing teqball in their free time – and without any incentives from our side – to improve their ball handling skills, or just for fun. It's also



Photo: Courtesy of Teqball

Teqball, the company, was founded by Gábor Borsányi, Gyuri Gattyán and Viktor Huszár (above), in 2014 and is based in Budapest, Hungary. “The company’s overriding aim is to create value through the power of sports,” says Gergely Muranyi, Head of Corporate Social Responsibility and Diplomatic Relations at Teqball.

really good for warming up and cooling down. We have created a series of training exercises to ensure players get the most from their teqball experience and can develop their football skills in the stadium using our apparatus.

And your product range?

We have the Teqball ONE, a very solid and durable table that is fixed to the ground. City councils use it in public parks and we use it for professional teqball competitions. We also have a compact, mobile version called the Teqball SMART, which is ideal for schools. And later this year, we are launching a more affordable version, which will retail for around EUR 700; it’s a lot easier to make and will allow us to significantly boost our production capacity.

Was it challenging to create a curved tabletop?

To develop a table with a flat surface is straightforward, but creating a curved tabletop that is perfectly smooth,

lightweight, quiet, easy to assemble and ship, presented a number of tough technical challenges.

Finding the right materials and the best way to put everything together took a lot of research, experimentation, patience and determination. In the end, we came up with two award-winning products. We won a Red Dot Design award for Teqball ONE and an iF design award for the Teqball SMART.

The tables are UV protected and can be used indoors and outside. The tabletop is made from high-pressure laminated (HPL) sheets and its support structure is made of steel that can withstand corrosion from the sea or the snow. In line with our commitment to quality, the tables are made from high-quality materials.

Our biggest business challenge was finding an investor to back the idea. After an 18-month search, we secured the financial backing of the Hungarian venture capitalist, Gyuri Gattyán.



Photos: Courtesy of Teqball

Teqball is the only training method in the world to give players such a high level of contact with the ball. "It is a great way for football enthusiasts to develop their technical skills, concentration and stamina," says Teqball's Gergely Muranyi.



“Our IP is our most valuable asset and protecting it gives us the freedom to build new business relationships without fear of compromising our IP assets.”

Which markets are you targeting?

Europe is our main focus; that is where the culture of football is most developed. Interestingly, football (soccer) is also taking off in the USA, where increasingly it's seen as a cheaper and safer alternative to American football. But we also have activities in Africa, Asia and Latin America; Brazilians, in particular, are interested in playing football and teqball.

How did you get people interested in teqball?

At first, it was difficult to persuade people to try the game, but once they did, they were hooked. We shared it with all our contacts in the football world. We knew we needed to reach a point where people saw their favorite soccer stars playing teqball and using our equipment. Now, many top soccer players, soccer clubs – including Barcelona, Real Madrid, Arsenal and Chelsea – and national teams are playing teqball. They began playing spontaneously, without any sales promotion from our side, because they really enjoyed playing the game. This has really helped promote the popularity of teqball as a sport.

Earlier this year the Olympic Committee of Asia formally recognized teqball as a sport. This is a huge step forward for us as it means that teqball is now an official sport in 45 Asian countries. It also opens the way for teqball to be included in the next Asian Games, the world's second largest sports event.

How did you go about establishing teqball as a professional sport?

Once we decided to promote it as a professional sport, we realized the need to establish a federation to oversee the governance of teqball and, in 2017, FITEQ, the International Teqball Federation, was established. It is based in Lausanne, Switzerland. We began that process shortly before the first Teqball World Cup in 2017 in Hungary. An indication of the rapid growth in the popularity of the sport is that 20 countries took part in the 2017 Teqball World Cup in Hungary and by the 2018 Teqball World Cup in Reims, France, 42 countries participated.

At what point did you realize the importance of IP?

When we came up with the idea of teqball, it was clear we needed to protect it. Because of its simplicity, anyone could copy the idea. So we understood the importance of IP from the outset. We made sure all potential partners signed our well-structured non-disclosure agreements (NDAs) and took steps to protect the design of our tables and other technical elements. So far, we have sought

protection in around 50 different countries and have taken advantage of the various cost-effective filing and registration systems offered by WIPO, including the Patent Cooperation Treaty and the Hague System for the International Registration of Industrial Designs, to do so.

Our IP is our most valuable asset and protecting it gives us the freedom to build new business relationships without fear of compromising our IP assets. IP rights are central to our future business plans in terms of creating a global network for the manufacture and distribution of our tables to ensure that sports enthusiasts who want to play teqball have affordable access to our products. In South America, for example, high import duties make our products prohibitively expensive. With a local partner in place to manufacture and distribute Teqball tables, we can make them more widely available and affordable. We are already working with a partner in China for that purpose. And in Europe, our web shop will be our main sales outlet as this will enable us to offer customers more flexible payment options (for example an initial down payment followed by monthly installments). We see this as an important way to make the sport available and accessible to everybody. The real value for us is not the number of tables we sell, but the number of players we draw to the game. We are selling sport and we are also bringing the joy of doing sport. IP rights also have an important role in enabling us to promote the sport and its long-term development.

What about the importance of sponsorship?

In the medium term, we envisage developing brands for different teqball competitions, such as the Teqball World Championships and the Teqball World Series. Each of these competitions will need to be supported by an effective IP strategy to attract sponsors, the media, top players and of course viewers. At the first Teqball Beach Games at Lupa Beach near Budapest, in 2018, we already signed sponsorship deals with major companies like BMW and Hublot. Given the enthusiasm surrounding the Teqball brand, our aim for the next Teqball World Championships in 2019 and in 2020, is to take Teqball sponsorship to a new level by expanding our sponsorship program to include many more top-tier sponsors.

Are teqball competitions broadcast?

Yes, broadcasting is an important part of fueling interest in the sport. In the future, the sale of broadcasting rights for these events will be the company's biggest revenue generator. We broadcast the 2018 Teqball World Cup for the first time on YouTube and Facebook. The Teqball Beach Games in Cape Verde in June 2019 were broadcast on TV in Europe and Africa. Things are really taking off in this area.

“When we came up with the idea of teqball, it was clear we needed to protect it. Because of its simplicity, anyone could copy the idea, so we understood the importance of IP from the outset.”

The award-winning Teqball SMART is ideal for schools. Teqball's product range also includes the award-winning Teqball ONE, a solid and durable version which is fixed to the ground and suitable for use by city councils in public parks. Later this year, the company will launch a more affordable lite version of the Teqball table.



What are your plans for the future?

Our sights are set on attracting as many people as possible to teqball. To this end, we are developing a range of training materials for schools to help create a new generation of teqball players. Our multisport team is also working to organize sports events around teqis, teqpong, qatch and teqvoly. Here again, IP will play an important role. But our ultimate goal is for teqball to become an Olympic sport.

While the business is now taking off, we have never viewed teqball simply as a profit-making business proposition. Our aim is to create value through the power of sport. That's why in 2018 we launched a number of corporate social responsibility (CSR) campaigns around the world. For example, we donated two Teqball tables to the Zaatari Refugee camp in Jordan, where we also rolled out a training program. The camp now has two professional teqball trainers who regularly train the kids in the camp. This is our way of giving them hope and a taste of the joy that comes from playing sport.

What message do you have for young inventors?

Believe in yourself, always stay humble and never take “no” for an answer.

In 2018, Teqball launched a number of corporate social responsibility campaigns around the world. For example, the company donated Teqball tables to the Zaatari Refugee camp in Jordan where it also rolled out a training program for children to learn the game.



Five years after *Alice*: five lessons learned from the treatment of software patents in litigation

By **Joseph Saltiel**, Marshall Gerstein & Borun LLP, Chicago, USA

Joseph Saltiel is special counsel at Marshall, Gerstein & Borun LLP. He is an IP litigator with a long track record of successfully representing clients in IP matters in courts across the country, the USPTO and the International Trade Commission. Mr. Saltiel also regularly counsels clients on IP issues such as licensing, opinions of counsel, NDAs, due diligence and related IP matters. He can be reached at jsaltiel@marshallip.com.

It has been five years since the Supreme Court's landmark decision in *Alice Corp. v. CLS Bank International*. *Alice* established a two-part test to determine if a software patent was unpatentable under US Patent Law (35 USC Section 101) for claiming ineligible subject matter. Under this two-part test, a court must first consider whether the patent claims are directed to a patent ineligible concept such as an abstract idea, and if so, the court should consider whether the claim's other elements transform the claim into a patent eligible concept. Applying this two-part test, the *Alice* decision held that known ideas are abstract, and reciting the use of a conventional computer in the claims to implement the known idea does not make the claim patentable subject matter. *Alice* has greatly impacted the litigation of software patents. *Alice* also gave defendants a new and highly successful defense that could be asserted early in litigation. In turn, patentees have had to take this new defense into account in their litigation strategy, and companies have questioned the value of software patents. After five years and hundreds of court decisions applying *Alice*, litigation of software patents has changed dramatically. Below are five lessons learned from software patent litigation after *Alice*.

1. ***ALICE* SHOULD BE CONSIDERED IN EVERY SOFTWARE PATENT LITIGATION.**

Before *Alice*, software patents were rarely challenged as unpatentable. After *Alice*, there were hundreds of patentability challenges per year targeting software patents. Most of these challenges were at least partially successful. The use of *Alice* became ubiquitous in software patent cases. Software patents were being challenged routinely and early in the litigation. Over half of the *Alice*-based challenges were made in early dispositive motions whereby the court decides the claim in favor of one or another party without need for further trial proceedings. Every patentee considering asserting a software patent therefore needs to consider the possibility of a patentability challenge based on *Alice*. Likewise, every defendant accused of infringing a software patent should consider an *Alice* motion.



It has been five years since the Supreme Court's landmark decision in *Alice Corp. v CLS Bank International*, which established a two-part test to determine the patentability of software patents under US Patent Law. *Alice* has had a great impact on the litigation of software patents.

2. LEGAL ANALYSIS OF SOFTWARE PATENTS UNDER *ALICE* DIFFERS FROM OTHER LEGAL ANALYSIS.

In litigation, parties must abide by the Federal Rules of Evidence. These rules provide for when evidence can be considered, what kind of evidence is proper, how evidence is introduced and how it should be considered. Words in legal instruments, and especially in patents, are vital. Attorneys spend countless hours debating the meaning of the words used in claims, and cases often turn on the most innocuous phrases. But for software patents facing an *Alice* inquiry, evidence and words are not as significant.

Under *Alice*, a court must first determine if the claim encompasses an abstract idea. Conventional methods of software are abstract. But because this first determination is a question of law, a defendant does not necessarily need to submit evidence that the claim is conventional (and therefore abstract). While the *Alice* decision cited publications to support its position that the concept was conventional, most courts applying *Alice* have not supported their findings with evidence. Attorney argument is sufficient. Moreover, the terminology used in the claim or the length and complexity of the claim do not matter for either part of the *Alice* test. *Alice* did not analyze the words of the claims, but instead characterized the claims as “the use of a third party to mitigate settlement risk” and found that concept to be conventional (i.e. abstract). Following *Alice*, most courts rely on a characterization of the claims instead of the words used in the claims for their analysis. Hence, an *Alice* decision may not be supported by evidence and may not depend on the entirety of the specific language of the claims.

3. ALICE ALLOWS FOR QUICK RESOLUTION OF LITIGATION INVOLVING SOFTWARE PATENTS OF QUESTIONABLE VALIDITY.

Software does not exist physically; it is represented by many 1s and 0s. Software can also represent the same functionality in unlimited ways. Software is inherently abstract, but because software is also patentable, abstractness under *Alice* means something else.

Generally, software source code is not publicly available and is difficult to reverse engineer. Software constantly changes, often with little record of the changes or the reasons for them, and software has no standard naming conventions. These attributes make it difficult to determine whether a software patent is valid. For example, it might be difficult to find prior art, make technical comparisons, or determine whether a disclosure is enabling. These are fact-intensive inquiries. To prevail on invalidity, a defendant will typically have to litigate up to or through trial even for highly questionable patents.

Alice makes it easier for a defendant to seek invalidity of a software patent that would otherwise be invalid as lacking novelty, obvious, or not enabled. In *Alice*, the software patent at issue recited a conventional methodology. But because the methodology was conventional, the court found it abstract. To be patentable, the claims needed another element that would transform the unpatentable subject matter into patentable subject matter. *Alice* held that using a conventional computer to perform the methodology did not make these claims patent eligible. That is, combining a conventional element with another conventional element does not make the claimed invention patentable. An obviousness analysis achieves the same result. By using an *Alice* analysis instead of an obviousness analysis, the court reaches a conclusion on invalidity but forgoes obviousness requirements, such as evidence that elements are conventional and the reasons for combining those elements.

Alice also explained that combining a conventional methodology with a conventional computer was an improper attempt to monopolize an abstract idea. In other words, if a claim is broad enough to encompass (or preempt) all embodiments of an idea, that is an indicator that the claim is abstract. Such a broad claim would also likely be invalid as not enabled because it is doubtful that a patent

specification could provide adequate support to enable every possible variation of an idea. But rather than task a defendant with the more difficult chore of identifying embodiments and proving they are not enabled by the specification, *Alice* simplifies the analysis by allowing a defendant to argue that a claim is too broad, and thus, abstract and unpatentable.

Alice frames the issue by asking whether a claim is abstract. But abstractness under *Alice* is a means to eliminate software patents that are overtly obvious or too broad to be enabled. By using an *Alice* analysis instead of an anticipation, obviousness, or enablement analysis, *Alice* allows defendants to bypass many of the complexities associated with litigation discovery and proving invalidity, which in turn allows defendants to file early dispositive motions and thereby attempt to avoid further trial proceedings.

4. ALICE DECISIONS ARE NOT PREDICTABLE.

While courts have consistently applied the two-part test set forth in *Alice*, the results of that application are unpredictable. One court may find a software patent unpatentable, but another court may find a similar software patent patentable. For many software patents, it is too difficult to make reliable predictions. As Paul Michel, former Chief Judge of the Federal Circuit, recently testified before Congress, the application of *Alice* has been “excessively incoherent, inconsistent and chaotic.”

Alice has conflated patentability, obviousness and enablement. Patent law is complicated as it is, but with *Alice*, courts are forced to cobble together three distinct and complicated legal concepts and rely on generic characterizations of the claims without evidence or a developed record. It is a difficult task, which has caused unpredictability when courts apply *Alice* to software patents.

Both the United States Patent and Trademark Office (USPTO) and the Court of Appeals for the Federal Circuit have tried to provide consistency, but neither has been effective. Andrei Iancu, Director of the USPTO, recognized this problem and recently issued USPTO guidelines on applying *Alice* to “keep rejections in their own distinct lanes [e.g., 101, 102, 103, and 112] and to stop commingling the categories of invention on one hand with the conditions for patentability on the other.” While these guidelines are

helpful, the USPTO is still limited by *Alice*. Moreover, courts are not bound by the USPTO guidelines, and in some instances, have chosen not to follow them.

Similarly, the Federal Circuit has tried to bring some consistency to *Alice*. For example, the Federal Circuit has held that the second part of the *Alice* analysis may require a factual inquiry. The effect of this holding is limited because it does not apply to the first step of an *Alice* inquiry. Furthermore, some courts have determined that no factual inquiry is necessary for their particular case nullifying the effectiveness of the holding. Regardless, the Federal Circuit is limited in what it can do because it also must confine itself to *Alice*. Indeed, one Federal Circuit Judge, in acknowledging the lack of clarity in evaluating patentability, advised practitioners that “[y]our only hope lies with the Supreme Court or Congress” to receive clarification. See *Athena Diagnostic, Inc. v Mayo Collaborative Services, LLC*. In that case, the Federal Circuit issued seven different opinions disputing how to apply US Supreme Court decisions on patentability. So, five years after *Alice*, if the Federal Circuit cannot agree on how to evaluate patentability, no one should expect to predict the outcome of a patentability challenge to software patents.

5. GOING FORWARD, MORE SOFTWARE PATENTS SHOULD SURVIVE AN ALICE CHALLENGE.

In 2015, over 60 percent of the software patents challenged under *Alice* were found to have at least one claim unpatentable. Since 2015, however, the percentage of successful *Alice* challenges to software patents has dropped each year. Year-to-date in 2019, the percentage of successful or partially successful *Alice* challenges is less than 50 percent. The trend indicates that the number

of successful *Alice* challenges will continue to drop. As noted above, the Federal Circuit has acknowledged, at least in some circumstances, that a factual inquiry may be necessary, making it harder to prevail on some early *Alice* motions, delaying a decision on *Alice*, and increasing the odds that the case can be resolved on other grounds. Also, some plaintiffs are no longer seeking to obtain and/or assert questionable software patents (or are seeking such a low settlement that an *Alice* challenge is not economically viable). In addition, as a result of *Alice*, patentees are drafting better claims, and the USPTO has done a better job of scrutinizing claims for patentability. Recently issued software patents are therefore more likely to survive an *Alice* challenge in litigation. Moreover, courts may defer to the USPTO’s determination on *Alice* if the issue of patent eligibility is considered during prosecution. It seems likely, therefore, that the rate of successful challenges of software patents under *Alice* will continue to drop.

There is no doubt that *Alice* has disrupted and will continue to disrupt software patent litigation. While the US Supreme Court is unlikely to overrule its unanimous *Alice* opinion, Congress has been actively considering legislation to overrule *Alice*. If passed, such legislation will significantly impact litigation of software patents and likely reverse many of the trends noted above. Until a new law is passed and used in litigation cases, it will be difficult to gauge the impact of that new legislation.

DISCLAIMER: The information contained in this article is for informational purposes only and is not legal advice or a substitute for obtaining legal advice from an attorney. Views expressed are those of the authors and are not to be attributed to Marshall, Gerstein & Borun LLP or any of its former, present or future clients.

A History of Intellectual Property in 50 Objects

By **Claudy Op den Kamp**, Bournemouth University, United Kingdom and **Dan Hunter**, Swinburne Law School, Australia.



Photo: Courtesy of Lina and Tom

The recently published *A History of Intellectual Property in 50 Objects* (Cambridge University Press, 2019) tells a vibrant and compelling history of IP using a series of objects to highlight the importance of IP and how it has evolved and worked in human history.

Quite simply, intellectual property (IP) is the most important subject that most people know nothing about. Which is why, a few years ago, we began working on a book that eventually became *A History of Intellectual Property in 50 Objects* (Cambridge University Press, 2019).

Initially, we wanted just to do a simple history of the IP system. But when we sat down to try to tell the story of the way that IP has evolved, we were confronted with a range of problems: IP itself is intangible, the laws creating it are arcane and complex, and the area is often seen

Photos: Courtesy of Lina and Tom



A History of Intellectual Property in 50 Objects explores products that have profoundly affected our lives and that demonstrate the importance of the IP system.

as difficult to understand and interpret. And yet, the IP system is one of the most important structuring systems in modern society. It underpins vast industries, such as aerospace, architecture, pharmaceuticals, media and entertainment. It is the locus of concerns about counterfeiting and piracy, it grounds arguments about trade, export and competition, and is at the core of discussions over knowledge-based economies and policies relating to creativity and innovation.

We wanted to convey to everyday readers and specialists alike just why IP matters so much, and why it's so interesting. So, to tell a vibrant and compelling history of IP, we turned to the objects that embody IP and which wouldn't exist without IP's intervention. This idea came from the field of material culture, a discipline of anthropology and sociology that recognizes that one of the best ways to understand a society is to look at the objects it produces. A Grecian urn or a Roman bath house tell us an enormous amount about the way that people lived, what mattered to them, and how their cultures developed.

So, too, with IP objects. The Coca-Cola bottle and brand exist because of the way that IP made them. The meaning and image of the Barbie doll is as distinct and clear as the sound of a struck bell because of the way that Mattel was able to control representations of the doll via its IP rights. In turn, the value in these objects changed the IP system, as the companies controlling them had a hand in influencing the developments of law.

These objects demonstrate the importance of the IP system. They invite questions about various aspects of its multifaceted development. They show us how IP has evolved and worked in human history and illustrate its influence on a range of historical events and movements. And, perhaps most importantly, they come with some great stories.

THE OBJECTS AND THE IP REGIMES

Some of these objects have so profoundly affected our lives that it's hard to know what our society would be like without them: the light bulb, the escalator, and the wi-fi router are just some examples of IP objects that have obviously shaped and re-shaped our world. Other IP objects have been just as important, but in less evident ways. The football is an object that we're all familiar with, but its connection to IP is only clear when you consider how the wealth of professional leagues is dependent on IP laws. And have

“... the IP system is one of the most important structuring systems in modern society.”

you ever wondered why the iconic black and white hex-patterned soccer ball was designed that way? (Hint: black and white television likes sharp delineations and bright contrast).

The history of IP started even before IP existed. Chapters on Goryeo Celadon and the Murano glass vase reflect the process of innovation in the centuries before there was a formal intellectual property system. Guilds like the Murano glassblowers and numerous rulers of pre-modern societies had learned the lesson underlying the entire IP system: control of intangible resources is a difficult, but vital, component of well-functioning societies. This lesson became even more evident during the Industrial Revolution, where patents in particular were central to the success of the Edison light bulb, the Morse telegraph, and Alexander Graham Bell's telephone.

One of the fascinating aspects of creating a history of IP is to see how different regimes affected different ages and different industries. If patents were vital in the Industrial Age, then copyright was important in the pre-industrial era, as it is in the Media Age in which we now live. A number of the objects in the book trace copyright's venerable lineage – and its ongoing importance – beginning with Tempesta's map of Rome, through the piano player roll, the audiotape cassette, the 3D printer, the CD, the Betamax, the photocopier, and eventually culminating in the Internet.

Trademarks are equally important, but in different ways and in different eras. Objects like the Lego brick, the Barbie doll, and the Coca-Cola bottle are heavily dependent on trademark protection. And the doctrine of trademark genericide – a brand that morphs into its product – is discussed in the entries on the escalator, champagne, and the Singer sewing machine.

POLITICS, PEOPLE, PLACES.

But it's not all about the laws. Sometimes it's about the social or political context, or the people or the places. The genesis stories of IP objects show the importance of this: objects as diverse as the Ferragamo wedge (shoe) and the Aspirin pill are described as the result of limited international trade due to war – Mussolini's war in Ethiopia and World War I, respectively.

Other times it's about the people concerned. Thomas Edison appears in no less than six entries. And who knew that Sherlock Holmes and Alexander Graham Bell both had a partner named Watson? The chapter on the Chanel 2.55 bag echoes Coco Chanel's aphorism that "imitation is the highest form of flattery" – a business strategy that is personal to her, and quite contrary to that of the current House of Chanel.

And when you take all of the stories in this book together, some remarkable observations are clear. For example, certain places show their importance. Was it the long, cold winters that made Rochester, New York (USA) the breeding ground of the Kodak camera, privacy laws, *and* the Xerox photocopier? We will probably never know.



Photos: Courtesy of Lina and Tom



The publication seeks to convey to everyday readers and specialists alike just why IP matters so much, and why it is so interesting.



A HISTORY

So why try to tell a history at all? Playwright Eugene O'Neill once said, "There is no present or future – only the past, happening over and over again, now."

Our book is called "A" history of intellectual property and not "THE" history of intellectual property because the telling of any history is always partial. These partial histories do meet and intersect at points, but are also provisional.

In collecting these marvellous stories about IP objects, we brought together a group of contributors from law and history, and also from sociology, media studies, horticulture, science and technology studies, and many others, across a range of countries. We wanted to understand where intellectual property laws have come from, how they have evolved, and what they mean to our lives now.

Whether found in a gallery, an archive, a home or a supermarket, these mundane and extraordinary objects are meant to evoke astonishment about their relationship with IP and demonstrate just how much the IP system has given us.

A History of Intellectual Property in 50 Objects is available now. Use the code KAMP2019 at checkout on Cambridge.org to access a 20 percent discount on this title.



34, chemin des Colombettes
P.O. Box 18
CH-1211 Geneva 20
Switzerland

Tel: +41 22 338 91 11
Fax: +41 22 733 54 28

For contact details of WIPO's External Offices
visit: www.wipo.int/about-wipo/en/offices

WIPO Magazine is published bimonthly and distributed free of charge by the World Intellectual Property Organization (WIPO), Geneva, Switzerland. It is intended to help broaden public understanding of intellectual property and of WIPO's work, and is not an official document of WIPO.

The designations employed and the presentation of material throughout this publication do not imply the expression of any opinion whatsoever on the part of WIPO concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

This publication is not intended to reflect the views of the Member States or the WIPO Secretariat.

The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by WIPO in preference to others of a similar nature that are not mentioned.

For comments or questions, contact The Editor at WipoMagazine@wipo.int.

To order a print version of the WIPO Magazine, contact publications.mail@wipo.int.

WIPO Publication No. 121(E)
ISSN 1020-7074 (print)
ISSN 1564-7854 (online)