

LORD OF THE FLIES: INTERNATIONAL INTELLECTUAL PROPERTY
LAWS

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ABSTRACT

The genesis of international intellectual property rights can be traced to the 1800s—during a world order dominated and helmed by the colonizing countries. Most frameworks for regulating intellectual property ordinarily try to limit the monopolistic rights granted to inventors over their inventions to promote creativity. In other words, these frameworks balance the economic rights of inventors with the right of society at large to access the inventions. With the advent of industrialization, there was a heightened focus on the need to protect the economics of intellectual property. Spearheaded by the west, intellectual property evolved into a trade issue, aimed at protecting the commercial interests of western corporations. The inherent political global imbalance in the backdrop of the modern international framework has facilitated the transfer of eastern resources towards the enrichment of western society in the form of legally sanctioned biopiracy. As a result, the effectuating consequences are similar to the drainage of eastern wealth during colonization. The neo-colonist roots of present-day international framework thus seems to find traces in its colonial history.

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I. INTRODUCTION

Towards the end of World War II, William Golding authored “Lord of the Flies” (“LOF”) with the intention of highlighting the inherent violence within human nature, regardless of one’s ethnicity. As noted by Golding: “it was simply what seemed sensible for me to write after the war when everyone was thanking God they weren’t Nazis. I’d seen enough to realize that every single one of us could be Nazis.”¹

The novel has been extolled as a seminal satirical take on the effects and rationale behind a colonized and western-centric world order. The basic premise of the novel revolves around a group of English boys—a symbolic reflection of the British empire—being stranded on an island and their slow descent into depravity. The shift from civility to depravity acts as a corollary to the violence predominant in all instances of Western colonialism and questions the idea of western supremacy, which acted as the driving force behind colonialism. The novel frames western supremacy in the comparative backdrop of “civilized society” vis-à-vis “savage natives.” For too long, the West has justified colonialism as its duty to evolve the “savages” of the east into civilized societies.² In fact, the decolonization process of the British is often characterized as a “gracious withdrawal” after having “helped” the eastern states towards civility.³

Building on this self-imposed idea of superiority, the novel pits ideas of eastern savages as the antithesis of western civilizations. To illustrate, the tritagonist, Piggy, is quoted as saying: “I agree with Ralph. We’ve got to have

¹ DAVID SCOTT KASTAN, *THE OXFORD ENCYCLOPEDIA OF BRITISH LITERATURE* 429 (Oxford Univ. Press 2006); see Stefan Hawlin, *The Savages in the Forest: Decolonialising William Golding*, 7 *CRITICAL SURV.* 125, 125 (1995).

² See Margaret Kohn & Kavita Reddy, *Colonialism*, *STAN. ENCYCLOPEDIA OF PHIL.* (Aug. 29, 2017), <https://plato.stanford.edu/entries/colonialism/>.

³ Hawlin, *supra* note 1.

rules and obey them. After all, we're not savages. We're English, and the English are best at everything. So we've got to do the right things."⁴

This quote is intended to resonate with the attitude of western society that frequently considers eastern traditions savage and subservient to western values. Throughout the novel, the protagonist, Ralph, acts as a symbolic mouthpiece for the West when he says "well, we won't be painted [...] because we aren't savages."⁵ and "which is better, law and rescue, or hunting and breaking things up?"⁶ However, the novel turns this understanding on its head by theoretically and literally transforming a majority of the English boys, led by Jack, the deuteragonist, into western notions of savagery. As Jack and the boys begin their descent, they start painting their faces and following a tribal understanding of life that focuses on hunting and survival over rules and order—reflecting a presupposed understanding of eastern culture. This is intended to highlight the "savagery" that lies within British and other western societies generally.

Notably though, such comparison of savagery and civility within the novel has been criticized as euro centric. The rationale being that the novel justifies the savage traditions of eastern society as boundary-less and prevalent across western societies, instead of questioning the impetus that results in negatively connoting the traditions of east as savagery.⁷ By presuming "savagery" to be eastern without any reasoning, the novel inherently agrees with western philosophies that equate the two subjects. The novel conspicuously fails to question its most basic premise, and to some extent, unintentionally aligns itself with the hegemony it sought to eliminate. Regardless, the novel's fundamental theme of denigrating the veracity and credibility of western hubris and values also forms the basis for this Paper.

The presupposition of the novel provides inspiration to assess the western biases that are prevalent in the current world order, specifically within the international frameworks for intellectual property. Traditionally, the genesis for the globalization of intellectual property has been rooted in "civilizing" the national legislations of the eastern states towards a western standard of protection. Similar to the rationale often given by colonizers, western states have foisted the frameworks for international protection on eastern states with claims of developing their societies.⁸ In complicity, international organizations have lauded the benefits and significance of adopting western

⁴ WILLIAM GOLDING, *LORD OF THE FLIES* 42 (Penguin Books 1954).

⁵ *See id.* at 172.

⁶ *Id.* at 180.

⁷ *See Hawlin, supra* note 1, at 127–29.

⁸ Cynthia M. Ho, *Biopiracy and Beyond: A Consideration of Socio-Cultural Conflicts with Global Patent Policies*, 39 U. MICH. J. L. REFORM 433, 469–70 (2006).

standards for achieving economic and developmental progress within the east.⁹

Accordingly, this Paper contributes to this debate by assessing the western biases present in the current global framework for enforcing and protecting intellectual property. To understand the biases, this Paper traces the historical conceptualization and commercialization of international intellectual property laws. Part II of this Paper elaborates upon the terminologies used by the author and the underlying rationale thereof. Part III discusses the western influences that have eventuated in the evolution of a standardized international system for intellectual property, and the resultant paradigm shift towards a heightened focus on commercialization. It is argued that the act of commercialization has gained further impetus under the current international framework that chooses to prioritize the economic rights of inventors over the right of access of communities. One such example is the recent legal dispute between Monsanto and Nuziveedu in India regarding the patentability of the Bt gene,¹⁰ which is grounded solely in protecting the commercial interests of Monsanto.

In turn, part IV assesses the socio-economic impact of the westernized framework and its role in sanctioning acts of biopiracy. The effects of legally permissible biopiracy are analogous to the plundered wealth and resources of colonies. The neo-colonial roots within the extant frameworks arguably make them by-products of western colonization.

II. TERMINOLOGY

Before dwelling further, it is prevalent to note certain terminologies in this Paper. Predominantly, the use of “western nations” will refer to industrialized nations considered to be developed in the modern age, such as the United States of America (“U.S.”). Further, it will largely encompass the major colonizing powers, such as the United Kingdom (“U.K.”) and Germany. In contrast, “eastern nations” will relate to the developing nations of the world, notably of the African and South-East Asian continents, that share similar characteristics of colonization such as low gross domestic product (“GDP”) and inadequate infrastructure. Note that the aforementioned terms are an excessive generalization and are not reflective of all countries that may fall within the ambit of “western” or “eastern” blocs. Casting states in binary blocs inevitably overlooks the nuances of the colonial and post-

⁹ Ruth L. Gana, *The Myth of Development, The Progress of Rights: Human Rights to Intellectual Property and Development*, 18 L. & POL’Y 315, 331 (1996).

¹⁰ See Nidhisha Garg, *Monsanto v. Nuziveedu: A Missed Opportunity by the Supreme Court?*, KLUWER PAT. BLOG (Jan. 27, 2020), <http://patentblog.kluweriplaw.com/2020/01/27/monsanto-v-nuziveedu-a-missed-opportunity-by-the-supreme-court/>.

colonial legacy of these states, while also characterizing one bloc (*i.e.*, the western bloc) in a superior hierarchy over the other (*i.e.*, the eastern bloc).¹¹

Nonetheless, the justification for the terminologies arises due to their proximal connection. Statistically, a majority of the past colonies fall within the definitional ambit of developing or eastern countries today (primarily on account of the colonization).¹² Moreover, since the western states predominantly led the industrialization age to form the current spectrum of developed nations—arguably due to the history of colonization that allowed the states to develop at a pace faster than their colonized counterparties¹³—the terminologies, though generalized, do create a specific linkage equating “western,” “developed,” and “colonizing” states. For a better understanding of this linkage, one only needs to look towards the drainage of wealth theory, coined during the period of colonized India. The theory refers to transfer of a colony’s resources to its colonizer, whereby the colony’s resources are drained to enrich and develop the colonizer.¹⁴

Accordingly, for the purposes of this Paper, the terminologies will be used interchangeably, notwithstanding the philosophical concerns regarding the same.

III. INTERNATIONAL INTELLECTUAL PROPERTY: VESTIGES OF WESTERN PHILOSOPHY

The concept of intellectual property has been prevalent across societies for centuries, though the initial birth of this concept can be credited to nationalist anti-monopolistic laws.¹⁵ The history of intellectual property highlighting such norms has been largely sporadic and territorially specific. This can be seen in the prior American approach of attributing abysmal protection to the intellectual property of foreign authors within its territories. In fact, it is often said that the American publishing industry was “built on the

¹¹ See Peter J. Katzenstein, *The Second Coming? Reflections on a Global Theory of International Relations*, 11 CHINESE J. INT’L POL. 373, 375 (2018); Liddy S. Curbishley, *Destabilizing the Colonization of Indigenous Knowledge in the Case of Biopiracy* (2015) (M.A. thesis, Utrecht University) (on file with Utrecht University Repository).

¹² The European colonies were predominantly Asian and African countries. For a better understanding, see *Decolonization of Asia and Africa, 1945-1960*, U.S. DEP’T OF STATE ARCHIVE (2001), <https://2001-2009.state.gov/r/pa/ho/time/cwr/98782.htm>.

¹³ Daron Acemoğlu & James A. Robinson, *The Economic Impact of Colonialism*, in 1 THE LONG ECONOMIC AND POLITICAL SHADOW OF HISTORY 81, 81 (Stelios Michalopoulos & Elias Papaioannou eds., 2017).

¹⁴ RACHEL DWYER, KEY CONCEPTS IN MODERN INDIAN STUDIES 70 (Gita Dharampal-Frick et al. eds., 2016).

¹⁵ See Peter Drahos, *The Universality of Intellectual Property Rights: Origins and Development*, WORLD INTELL. PROP. ORG. [WIPO] PANEL DISCUSSION: INTELL. PROP. & HUM. RTS. 13–41 (1998), http://193.5.93.81/edocs/pubdocs/en/intproperty/762/wipo_pub_762.pdf#page=20.

piracy of European works.”¹⁶ Such territorial norms inevitably sanctioned discriminatory actions by states against others, with certain states protecting foreign works and others electing not to. Eventually, with the advent of bilateral and multilateral treaties between states, intellectual property norms took on an international aspect.¹⁷ Having recognized the concerns with territorial norms, the states instead ushered into an age of intellectual property based on mutual and universal reciprocity.¹⁸

In this context, this Paper argues that the extant framework of intellectual property is biased in favor of western industrialized states. Needless to mention, the bias is not only in respect of the framework generally, but also with respect to the journey that led to the harmonization of such a framework across territories. To understand this journey, it is pertinent to trace the history of intellectual property norms and the states that were instrumental in shaping them.

A. Traditional Intellectual Property Rights: A Balanced Approach

The traditional legal framework on intellectual property has predominantly focused on balancing the economic rights of inventors with the right of access of users.¹⁹ To illustrate, the period of copyright protection under the Berne Convention for Protection of Literary and Artistic Works (“Berne Convention”) was finalized with the right of society to “have free access to the cultural heritage” in mind.²⁰ Similarly, the regime of compulsory licensing was enacted with a view to further public interest rights, while ensuring certain economic benefits to the inventor.²¹

The tension between these two stakeholders is accurately encapsulated under Article 27 of the Universal Declaration of Human Rights (“UDHR”):

27(1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.

¹⁶ PETER DRAHOS & JOHN BRAITHWAITE, INFORMATION FEUDALISM: WHO OWNS THE KNOWLEDGE ECONOMY? 32–33 (Earthscan 2002); see Samuel Ricketson, *The Birth of the Berne Union*, 11 COLUM. J.L. & ARTS 9, 14 (1986).

¹⁷ See *id.* at 27 (umbrella perspective on bilateral treaties).

¹⁸ E.g., Berne Convention for the Protection of Literary and Artistic Works art. 5, Sept. 9, 1886, 828 U.N.T.S. 221 [hereinafter Berne Convention]; Universal Copyright Convention art. 11, Sept. 6, 1952, 6 U.S.T. 2731, 216 U.N.T.S. 132.

¹⁹ *Understanding Copyright and Related Rights*, WIPO 3 (2016), https://www.wipo.int/edocs/pubdocs/en/wipo_pub_909_2016.pdf.

²⁰ CLAUDE MASOUYÉ, GUIDE TO THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS (PARIS ACT, 1971) 46 (WIPO 1978).

²¹ *Id.* at 70.

27(2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.²²

While Article 27(1) advocates for a community's right to access its cultural heritage, Article 27(2) focuses on the contrary economic rights of inventors. Likewise, Article 15(1)(c) of the International Convention on Economic, Social and Cultural Rights ("ICESC") provides for the right of every person to "benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author."²³ Similar to the UDHR, the ICESC, through Article 15(1)(a), eschews the right of the public to take part in their cultural life. The normative tension between the right to access cultural heritage vis-à-vis the economic rights of inventors becomes significant when examined through the prism of traditional knowledge. This is because economic rights for inventions based on traditional knowledge of other societies tends to limit the said societies' right of access to its own traditional knowledge (read, cultural heritage).²⁴

The UDHR and the ICESC are not alone in formally recognizing the right of access and the right of cultural participation of communities. Article 8(j) of the Convention on Biodiversity obligates contracting states to ensure that the knowledge, innovations, practices, and lifestyles of indigenous and local tribes are preserved and protected, while only permitting the dissemination of such information with the consent and involvement of the original holders.²⁵ Moreover, Article 17 of the African Charter on Human Rights provides for the right of every citizen to "take part in the cultural life of his community."²⁶ However, in contrast, the charter does not encompass the tensions present in the UDHR and the ICESC since it fails to provide for the economic rights of inventors, choosing to focus on participation over remuneration.

It is thus seen that a conventional approach towards intellectual property has generally prescribed balanced provisions for the public's right to access their cultural heritage, including protectible inventions based on such heritage, while allowing inventors certain economic rights.

²² G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948).

²³ G.A. Res. 2200 (XXI), International Covenant on Economic, Social, and Cultural Rights (Dec. 16, 1966).

²⁴ See *infra* Section IV.

²⁵ The Convention on Biological Diversity art. 8, June 5, 1992, 31 I.L.M. 818, 1760 U.N.T.S. 79.

²⁶ Org. of African Unity [OAU], *African (Banjul) Charter on Human and Peoples' Rights*, art. 17, OAU Doc. CAB/LEG/67/3 rev. 5 (June 27, 1981).

B. Modern Intellectual Property Rights: A Trade Issue

The tension between the conflicting rights of economic benefit and access is both normative and geographical.²⁷ Normative tension relates to the international community's approach towards balancing the conflicting rights within legal frameworks, while geographical tension is rooted in the inherent imbalance of power between the western and eastern nations. This section highlights the complete normative overhaul of traditional intellectual property frameworks by the international community, leading to a system that prioritizes economic rights over the right of access. The paradigm shift from the traditional framework of intellectual property towards a trade issue is influenced by the geographical tension between nations and the biases arising thereof. In fact, it can be argued that the balance struck by the U.S. in its national laws, in favor of economic rights over the right of access,²⁸ is reflected within the current international intellectual property framework.

As noted previously, the origin of intellectual property is grounded in territorial laws. This territorial stage was largely shaped by western states such as the U.K., U.S., and France. To illustrate, the first copyright act is often credited to be the Statute of Anne, as enacted by the U.K. in 1710.²⁹ This statute has arguably shaped the copyright laws of the U.S.,³⁰ while initiating the emergence of a common copyright law for commonwealth countries.

But perhaps the most suitable and relevant illustration of the westernization of intellectual property is in the Berne Convention. Under Article 19 of the initial text of the Berne Convention, countries had the right to accede to the convention on behalf of their colonies and foreign possessions.³¹ In fact, the accession of the U.K. (Great Britain) to the Berne Convention was also on behalf of all her colonies.³² Accordingly, the Berne Convention was an instrument of the colonial heyday, foisted upon states (colonies) that played no role in shaping its framework. By default, many

²⁷ Martin de Beukelaer & Martin Fredricksson, *The Political Economy of Intellectual Property Rights: The Paradox of Article 27 Exemplified in Ghana*, 46 REV. AFR. POL. ECON. 459, 461 (2018).

²⁸ See KEITH E. MASKUS, INTELLECTUAL PROPERTY RIGHTS IN THE GLOBAL ECONOMY 65–66 (Peterson Inst. for Int'l Econ. 2000).

²⁹ Dennis W. K. Khong, *The Historical Law and Economics of the First Copyright Act*, 2 ERASMUS L. & ECON. REV. 35, 35 (2006).

³⁰ Lyman Ray Patterson, *The Statute of Anne: Copyright Misconstrued*, 3 HARV. J. ON LEGIS. 223, 223 (1966).

³¹ ARPAD BOGSCH, WIPO, THE BERNE CONVENTION FOR PROTECTION OF LITERARY AND ARTISTIC WORKS FROM 1886 TO 1986, at 124 (Int'l Bureau of Intell. Prop. 1986).

³² *Id.* at 134; DRAHOS & BRAITHWAITE, *supra* note 16, at 75.

eastern nations were automatically brought under the aegis of the Berne Convention during the period of colonization.³³

Although the Berne Convention was a result of western ideologies, it is important to note that the convention was not rigid in its enforcement and application. Disputes under the Berne Convention were to be directed to the International Court of Justice (“ICJ”). Interestingly though, until date, no proceedings have been brought before the ICJ under the Berne Convention.³⁴ Furthermore, the Berne Convention worked on the goodwill and individual responsibilities of each member. It provided only the broad skeletal understanding of norms while allowing sufficient latitude to members to legislate as per their discretion.³⁵ In addition, the Berne Convention was not universally accepted at the time of its implementation such that the U.S., despite being one of the fastest developing economies at the time, only acceded to it in 1989.³⁶

Naturally then, the Berne Convention did not prove to be an effective framework for intellectual property and states were forced to enact several other multilateral treaties to harmonize the laws and to establish an effective framework.³⁷ Despite such treaties and the establishment of an international regulatory body—World Intellectual Property Organization (“WIPO”)—the international society did not reach any substantial or effective conclusion regarding an international framework for intellectual property.

The status-quo, however, changed with the enactment of the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”), that equivocally linked intellectual property and international trade together, with the intention of ensuring that intellectual property does not become a barrier to cross-border transactions.³⁸ Interestingly though, the paradigm shift towards trade also ensured the deviation of intellectual property from the traditional understanding of a balanced approach. While the balanced approach focused on balancing the rights of an owner with the right of access of others, a trade-based system primarily focused on the economic rights of the owner. This is further highlighted by the absence of access and

³³ Ruth Okediji, *The International Relations of Intellectual Property: Narratives of Developing Country Participation in the Global Intellectual Property System*, 7 SING. J. INT’L. & COMP. L. 315, 316 n.3 (2003); DRAHOS & BRAITHWAITE, *supra* note 16, at 75.

³⁴ Christopher Wadlow, *The Beneficiaries of TRIPs: Some Questions of Rights, Ressortissants and International Locus Standi*, 25 EUR. J. INT’L L. 59, 62 (2014).

³⁵ See Berne Convention, *supra* note 18, art. 2–3.

³⁶ *Berne Notification No. 121*, WIPO (Nov. 17, 1988), https://www.wipo.int/treaties/en/notifications/berne/treaty_berne_121.html.

³⁷ See Drahos, *supra* note 15, at 7–8, 11.

³⁸ Agreement on Trade-Related Aspects of Intellectual Property Rights pmb., Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS agreement].

participation rights from TRIPS³⁹ except by way of Article 7, which toutwardly stipulates the need for a balanced approach⁴⁰ without containing provisions that would ensure the same. It can be argued that the rationale behind excluding access rights is due to TRIPS' intention to engage with only one sub-aspect of intellectual property, the economics, while allowing other organizations to cover the cultural rights associated with intellectual property. Nevertheless, the lack of a holistic understanding in TRIPS is concerning since TRIPS has now become the single most effective and utilized international legislation for enforcing intellectual property. Unlike other treaties, dispute resolution under TRIPS precludes the jurisdiction of the ICJ. Instead, disputes can be submitted to the World Trade Organization ("WTO").⁴¹ While the ICJ mechanism has not been used until date, the WTO dispute resolution mechanism is regularly used for the enforcement of intellectual property.⁴² Although TRIPS unequivocally fails to address a crucial aspect of intellectual property (*i.e.*, individual's access and participation rights), it has now eventuated into the predominant framework for governing all state actions with respect to intellectual property.

The predominance of TRIPS and the interlinkage of intellectual property with trade is further concerning when one understands the biases of developed countries that have led to this paradigm shift. In fact, the TRIPS agenda was largely pushed onto the international community by the Intellectual Property Committee ("IPC") (comprising of senior executives of U.S. multinational corporations), along with the Keidanren Federation (federation of economic organizations of Japan), and the Union of Industrial and Employees Confederation ("Union") (official spokesperson for European business industry).⁴³ The influence of the IPC is further elaborated by James Enyart of Monsanto, who characterized the role of the IPC and the business community as "patients, diagnosticians, and prescribing physicians"⁴⁴ for resolving the commercial concerns attached with intellectual property. Prior to TRIPS, the IPC, Keidanren, and the Union had authored the Basic Framework of General Agreement on Tariffs and Trade ("GATT") Provisions on Intellectual Property: Statement of Views of the European, Japanese and United States Business Communities—a multilateral blueprint for trade negotiations and intellectual property.⁴⁵

³⁹ Martin Fredriksson, *Piracy, Globalisation and the Colonisation of the Commons*, 6 GLOB. MEDIA J. - AUSTL. ED. 1, 4 (2012), https://www.researchgate.net/publication/277754662_Piracy_Globalisation_and_the_Colonisation_of_the_Commons.

⁴⁰ See TRIPS agreement, *supra* note 38, art. 7.

⁴¹ See *id.* art. 64.

⁴² See DRAHOS & BRAITHWAITE, *supra* note 16, at 111, 113.

⁴³ VANDANA SHIVA, *BIOPIRACY: THE PLUNDER OF NATURE AND KNOWLEDGE* 82 (N. Atlantic Books 2016).

⁴⁴ *Id.* at 82.

⁴⁵ DRAHOS & BRAITHWAITE, *supra* note 16, at 123.

Western corporations' need for TRIPS was exacerbated by the lack of effective enforcement of their patents within developing countries, thereby leading to a decrease in revenue. One such illustration was the patents regime of India for pharmaceutical drugs. Unlike the west, the Indian Patents Act (1970) did not originally allow for product patents of drugs or agro-chemicals; instead it solely granted process patents.⁴⁶ The distinction between product and process patent ensured that the end products, such as pharmaceutical drugs, could not be patented, thus incentivizing manufacturers to find cheaper alternate processes for the same products. Consequently, the system allowed for the birth and blossoming of the generic drugs industry within India, which posed a direct threat to the revenues of the pharmaceutical industry of the west because the generic industry offered similar drugs at a price substantially lower than the western industries.⁴⁷

Yet, even before the advent of TRIPS, developed states have generally and often prioritized the economic aspects of intellectual property. For example, German industries have had a long-standing policy of using patent law to create a monopoly within their industry.⁴⁸ It has been noted that “[p]atents are the best and most effective means of controlling competition. They occasionally give absolute command of the market, enabling their owner to name the price without regard to cost of production.”⁴⁹

Accordingly, patent laws were used and abused by industries and corporations to exclude competition and impose their own terms on a particular industry. This misuse of patents became even more popular on account of globalized industries and intellectual property norms, whereby corporations were entitled to create monopolistic situations over the entire global trade as opposed to industries within their territories. Patents were thereafter used by American industries to cartelize on international trade. Between 1870 and 1911, the number of patents granted by the U.S. had jumped from 120,573 to 1,002,478.⁵⁰ An instance of the monopolization of developed countries through intellectual property is reflected in the cartelization of the electric lamp industry. Specifically, leading German, American, and Dutch producers of lightbulbs had shuffled their trademark and patent portfolios to divide the world market among themselves and monopolize on their respective shares in the market.⁵¹ Furthermore, through the British Publishers Traditional Markets Agreement of 1947, the world

⁴⁶ The Patents Act, No. 39 of 1970, §5 (India).

⁴⁷ *E.g.*, DRAHOS & BRAITHWAITE, *supra* note 16, at 67.

⁴⁸ *Id.* at 47.

⁴⁹ *Id.* at 44.

⁵⁰ *Id.* at 47.

⁵¹ Markus Krajewski, *The Great Lightbulb Conspiracy*, IEEE SPECTRUM (Sept. 24, 2014), <https://spectrum.ieee.org/tech-history/dawn-of-electronics/the-great-lightbulb-conspiracy>.

market for books was largely divided between British and American publishers.⁵²

In fact, one of the earlier legislations to use economic coercion for the enforcement of intellectual property in the nineteenth century can be traced to the Caribbean Basin Economic Recovery Act (1983).⁵³ Pursuant to Section 2701 of this Act, the U.S. would offer duty free benefits to beneficiary countries. Notably, beneficiary countries would not include (i) countries that were repudiating the trademark, patent, or copyright of any American citizen or corporation, or (ii) countries whose government agencies broadcast American copyright materials.⁵⁴ In addition, the factors for determining the beneficiary countries depended on the efficacy of the legal system provided within the country for foreign nationals to enforce and protect their intellectual property.⁵⁵ This form of economic coercion employed by the U.S. is also reflected in Section 301 of the Trade Act of 1974, whereby the U.S. had the authority to issue trade sanctions against foreign countries whose actions unreasonably hampered the American economy⁵⁶—with specific focus on the intellectual property of the U.S. As further noted by the U.S. Congressional Research Service, “section 301 has been viewed to help U.S. negotiators secure commitments from foreign governments to help ensure that the interests of U.S. IPR holders are protected abroad.”⁵⁷

Moreover, by way of the 1988 Omnibus Trade and Competitiveness Act, the U.S. Trade Representative agency (“USTR”) was empowered to identify foreign countries that deny adequate protection of intellectual property rights or deny fair market access to American individuals that rely upon such intellectual property protection.⁵⁸ The coercive effects of these laws are seen in the eventual resolution of the U.S.-South Korea dispute on intellectual property in 1985. Pursuant to section 301, the USTR had initiated an investigation against Korea with respect to their intellectual property rights system.⁵⁹ Capitalizing on this investigation, the U.S. entered bilateral negotiations with Korea, which culminated in the Memorandum on the 1986 South Korea-U.S. Copyright, Patent, and Trademark Rights Agreement. The Agreement required Korea to overhaul its copyright laws for computer

⁵² Mary Nell Bryant, *English Language Publication and the British Traditional Market Agreement*, 49 LIBR. Q.: INFO., CMTY., POL'Y 371, 371 (1979).

⁵³ See 19 U.S.C. § 2704(a)(1) (2021).

⁵⁴ 19 U.S.C. § 2702(b)(2)(B)(i)–(ii), (b)(5) (2021).

⁵⁵ 19 U.S.C. § 2702(c)(9) (2021).

⁵⁶ STAFF OF S. COMM. ON FIN. & STAFF OF H. COMM. ON WAYS & MEANS, 92ND CONG., TRADE ACT OF 1974: SUMMARY OF THE PROVISIONS OF H.R. 10710, at 11 (Comm. Print 1974).

⁵⁷ ANDRES B. SHWARZENBERG, CONG. RSCH. SERV., SECTION 301 OF THE TRADE ACT OF 1974: ORIGIN, EVOLUTION, AND USE 18 (2020).

⁵⁸ H.R. REP. NO. 100-576, pt. 3 (1988) (Conf. Rep.).

⁵⁹ Panel Report, *United States – Sections 301–310 of the Trade Act of 1974*, WTO Doc. WT/DS152/R, at 278–92 (adopted Jan. 25, 2000).

software and patent laws for pharmaceutical products, and accede to international intellectual property rights treaties, among others. In contrast, minimal obligations were placed on the U.S.⁶⁰

It would be an understatement to claim that the U.S. has been the only state to link trade with intellectual property, though it has been the most proliferate. The European Union (“EU”) directive on the harmonization of certain aspects of copyright and related rights in the information society clearly stipulates the rationale for harmonizing copyright laws to prevent the distortion of the EU’s internal (trade) markets.⁶¹ The utility of intellectual property rights is reduced to that of ensuring the “smooth functioning of the internal market”⁶² and providing “satisfactory returns on [the] investments”⁶³ to authors and performers.

Therefore, it is seen that the excessive economic focus and perspective of intellectual property rights is a by-product of western philosophy that predominantly focuses on rewarding inventions without paying heed to one’s right of access. The paradigm shift via the introduction and dominance of TRIPS in present-day is thus remnant of this western philosophy that chooses to view intellectual property through the prism of finance and trade. This bias has resulted in the legal sanctioning of “biopiracy” and inevitable neo-colonialism of the developing states by the developed states—as will be elaborated upon in the next section of this Paper.

IV. LEGALLY SANCTIONED BIOPIRACY

Biopiracy has been characterized as “the practice of commercially exploiting naturally occurring biochemical or genetic material, especially by obtaining patents that restrict its future use, while failing to pay fair compensation to the community from which it originates.”⁶⁴

In essence, biopiracy relates to two-fold exploitation: (i) appropriation of the intellectual and creative property of community and (ii) appropriation of economically viable resources of community. In a colonial context, biopiracy refers to the massive transfer of biological and intellectual wealth of the

⁶⁰ Determination Under Section 301 of the Trade Act of 1974, 51 Fed. Reg. 27811, 29443 (Aug. 18, 1986); *Statement by Deputy Press Secretary for Foreign Affairs Djerejian on the South Korea-United States Trade Policy Online*, THE AM. PRESIDENCY PROJECT (July 21, 1986), <https://www.presidency.ucsb.edu/documents/statement-deputy-press-secretary-for-foreign-affairs-djerejian-the-south-korea-united>.

⁶¹ Council Directive 2001/29, 2001 O.J. (L 167) ¶ 1 (EC).

⁶² *Id.* ¶ 7.

⁶³ *Id.* ¶ 10.

⁶⁴ DEBASHIS BANDYOPADHYAY, SECURING OUR NATURAL WEALTH: A POLICY AGENDA FOR SUSTAINABLE DEVELOPMENT IN INDIA AND FOR ITS NEIGHBORING COUNTRIES 172 (2018) (ebook); *Biopiracy*, LEXICO, <https://www.lexico.com/definition/biopiracy> (last visited Oct. 27, 2021).

eastern communities to the western states⁶⁵—analogous to the drainage of wealth propounded by western colonizers. The residuary effect of colonialism is further reflected in the actual reality of biopiracy whereby “invaluable... cultural resources [are] flowing out of countries of South [eastern states] as ‘raw materials’ into developed nations of North [western states] where they are magically transformed [...] into protected intellectual properties.”⁶⁶ The effect of appropriation is strengthened by way of patents that formalize ownership rights over the appropriated resources, even to the exclusion of communities possessing the resources.

Perhaps an accurate example of entitled appropriation or misappropriation comes from Ralph in LOF when he characterizes the actions of Jack’s group in taking his fire as “stealing.”⁶⁷ Pertinently in this instance, Ralph is cast in the role of a developed state, Jack’s group is the figurative developing state, and the fire represents the various inventions that are based on traditional knowledge. By categorizing the actions as theft, Ralph essentially implies monopolistic ownership rights over his fire and inevitably over the common and natural elements that were used to build it. This is despite the fact that Jack was the initial mastermind for determining the method of creating fire.⁶⁸ Ralph’s statements resonate with those of developed corporations who are legally permitted to lay ownership claims over the communal traditional knowledge of others, and thereafter prevent them from freely accessing their own knowledge.

This section, therefore, aims to highlight the aspects of the international framework that have been instrumental in standardizing and sanctioning biopiracy by western states of eastern resources. Accordingly, the section will analyze the extent to which traditional knowledge is protected as an intellectual property right, while emphasizing on the role of patents in furthering biopiracy. The limited focus of the section is, however, not intended to discount the threat posed by other forms of biopiracy either by way of diplomatic relations or through imbalanced economic hierarchies.

A. *Traditional Knowledge and Legal Frameworks*

Traditional knowledge has, until date, remained ambiguously undefined within the international legal framework, and often within national legislations. Theoretically though, “traditional knowledge” can be said to

⁶⁵ See Linda Bullard, *Freeing the Free Tree: A Brief Paper on the First Legal Draft of a Biopiracy Patent: The Neem Case*, WOMEN & LIFE ON EARTH (Mar. 2005), <http://www.wloe.org/WLOE-en/information/globalization/neembriefmar05.html>.

⁶⁶ Keith Aoki, *Neocolonialism, Anticommons Property, and Biopiracy in the (Not-So-Brave) New World Order of International Intellectual Property Protection*, 6 IND. J. GLOB. LEGAL STUD. 11, 49 (1998).

⁶⁷ GOLDING, *supra* note 4, at 152–53.

⁶⁸ *Id.* at 32.

encompass the traditional information, cultural expressions,⁶⁹ know-how, information, innovations, practices, skills and learnings of communities that have been nurtured within the communities for generations and reflect their heritage.⁷⁰

To better understand and protect the scope of traditional knowledge, WIPO members established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (“IGC”) in 2000. The IGC’s primary aim was to finalize “an agreement on an international legal instrument(s) for the protection of traditional knowledge, traditional cultural expressions and genetic resources.”⁷¹ However, despite the passage of over two decades since its establishment, the IGC has not been effective in adopting a single legal multi-lateral instrument towards formalizing global protection of traditional knowledge. Perhaps, the most effective step of the IGC has been to agree in 2009 to adopt a legal instrument that would guarantee effective protection to traditional knowledge.⁷² However, to date, the text of such legal instrument is awaited.

The extant international and national frameworks on intellectual property are also inadequate in their dealings with traditional knowledge. To illustrate, TRIPS acknowledges patent or *sui generis* rights for plant varieties,⁷³ but fails to address traditional knowledge and cultural traditions forming a part of patented plants materials. Further, TRIPS predominantly frames intellectual property as “private rights”⁷⁴ and requires patents to be granted for innovations capable of industrial application.⁷⁵ Such an understanding of intellectual property inevitably excludes innovations produced by communities or outside the industrialized mode of inventions, such as traditional knowledge. It leads to the opinion that results and proceeds of creativity can be protected as intellectual property only if they are economically viable. This interpretation of creativity and intellectual property is accurately captured by Vandana Shiva:

[T]he knowledge of our ancestors [...] is being claimed as an invention of US corporations and US scientists and being patented by them. The only reason something like that can work

⁶⁹ *Traditional Cultural Expressions*, WIPO, <https://www.wipo.int/tk/en/folklore/> (last visited Oct. 27, 2021) (generally, traditional cultural expressions (TEC) include expressions of ‘folklore’ such as music, dance, art etc.).

⁷⁰ WIPO, *INTELLECTUAL PROPERTY AND TRADITIONAL KNOWLEDGE 4* (2005), https://www.wipo.int/edocs/pubdocs/en/tk/920/wipo_pub_920.pdf.

⁷¹ *Intergovernmental Committee (IGC)*, WIPO, <https://www.wipo.int/tk/en/igc/> (last visited Oct. 27, 2021).

⁷² *See Tradition Knowledge and Intellectual Property – Background Brief*, WIPO, https://www.wipo.int/pressroom/en/briefs/tk_ip.html (last visited Oct. 27, 2021).

⁷³ TRIPS agreement, *supra* note 38, art. 27.

⁷⁴ *Id.* p.mbl.

⁷⁵ *Id.* art. 27.

is because underlying it all is a racist framework that says the knowledge of the Third World and the knowledge of people of colour is not knowledge. When that knowledge is taken by white men who have capital, suddenly creativity begins... Patents are a replay of colonialism, which is now called globalization and free trade.⁷⁶

Similarly, the inadequate legal framework is also reflected in the approach of western countries. To illustrate, the original text of Section 102 of the U.S. Patents Act (prior to amendment), provided for certain limitations to the grant of patents. Per the section, a patent could not be granted for inventions if the inventions were based on “prior art” (since this would disavow the novelty and non-obviousness criterion required of patents). Prior art, in essence, referred to information that evidenced an invention as being already known prior to the patent application for such invention. For reference, the original text of Section 102 read as follows:

Section 102... person shall be entitled to a patent unless—

- (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or
- (2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.⁷⁷

The section thus provided for a discriminatory understanding of American and foreign “prior art.” While prior art within the U.S. also covered oral materials, prior art of foreign countries was solely limited to information or materials that were present in printed formats. This restrictive understanding of prior art excluded foreign traditional knowledge since it is customarily present in oral forms within communities. Consequently, the exclusion of traditional knowledge from the definition of prior art eventuated into grants of several patents for western inventions that were solely based on the traditional knowledge of eastern communities.⁷⁸

The need for adequately protecting traditional knowledge is thus grounded in combating “legally” sanctioned acts of biopiracy. Protecting traditional knowledge is necessary to stop economic exploitation of the

⁷⁶ Chanda Talpade Mohanty, “*Under Western Eyes*” Revisited: *Feminist Solidarity Through Anticapitalist Struggles*, 28 SIGNS J. WOMEN CULTURE & SOC’Y 499, 512 (2003).

⁷⁷ 35 U.S.C. § 102(a)(1)–(2) (2021).

⁷⁸ See *infra* Section IV.B.

eastern communities by western corporations—an instance remnant of western colonialism and imperialism.

B. *Role of Patents*

In 1982, Barry MacTaggart, the erstwhile President and Chairman of Pfizer, published an op-ed in the *New York Times* titled “Stealing from the Mind.”⁷⁹ The op-ed argued that governments of developing countries designed laws that permitted American inventions to be “legally” stolen.⁸⁰ The op-ed not only focused on the “theft of American technology” by developing nations (with specific focus on India and Canada), but also discussed the extent of resources invested by the pharmaceutical companies towards creating the novel products.⁸¹ Interestingly though, the op-ed blatantly ignored the role of traditional knowledge and information of developing societies that has oftentimes been appropriated by western countries towards “creating” their inventions. MacTaggart’s statements reflect the sub-text in Ralph’s grievances with Jack for stealing *his* fire.

Linda Tuhiwi Smith’s message in “Decolonizing Methodologies; Research and Indigenous Peoples” encapsulates the hypocritical reactions of the western countries towards allegedly ineffective patent enforcement by developing nations, while simultaneously choosing to disregard the biases of their patent legislations that exclude the root contributors of their inventions:

[I]t appalls us that the West can desire, extract and claim ownership of our ways of knowing, our imagery, the things we create and produce, and then simultaneously reject the people who created and developed those ideas and seek to deny them further opportunities to be creators of their own culture and own nations.⁸²

It is further pertinent to note that through “Stealing from the Mind,” Barry MacTaggart was not advocating for effective patent enforcement as per the laws of the developing countries, but rather as per the standard provided within the U.S. Interestingly, this need to homogenize economic rights for intellectual property rights holders in line with the American standard was also the catalyst for the paradigm shift of intellectual property towards a trade issue by way of TRIPS.⁸³

One of the most popular illustrations of biopiracy through patents is cited to be the neem patents granted by various western states. In 1994, the

⁷⁹ Barry MacTaggart, *Stealing from the Mind*, N.Y. TIMES, June 9, 1982, at A23.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² LINDA TIHIWI SMITH, *DECOLONIZING METHODOLOGIES: RESEARCH AND INDIGENOUS PEOPLES 1* (Univ. of Otago Press 1999).

⁸³ *See infra* Section III.B.

European Patent Office (“EPO”) granted patent rights over a method of controlling fungi on plants using extracts of neem oil to the U.S. multinational corporation, W. R. Grace Company, along with the U.S. Department of Agriculture (“USDA”).⁸⁴ This patent was granted despite the prevalent usage of the fungicidal properties of neem oil and its extracts by the Indian agricultural society in the past. On account of wide-spread oppositions and documentary (*i.e.*, written) submissions of this Indian prior art, the patent was revoked by the EPO in 2000.⁸⁵ Despite this, there are still multiple patents that have been granted by agencies for the properties and usages of neem oil that are otherwise traditionally and inter-generationally known within Indian communities, albeit in a more oral than written form.⁸⁶ For example, the U.S. patent to Robert O. Larson⁸⁷ was granted and subsisting (until its expiry) for the pesticidal properties of neem oil—even though these properties of neem oil have been well documented (mostly orally) in Indian communities for centuries.

Similarly, patents have been granted to American scientists over methods of using turmeric for healing purposes,⁸⁸ despite the healing functionality of turmeric being known and used by generations of Indian communities. In fact, the Indian prior art has also been recognized in the patent applications: “turmeric has long been used in India as a traditional medicine for the treatment of various sprains and inflammatory conditions.”⁸⁹ Despite this, only a limited number of patents for turmeric’s properties have been cancelled upon re-examination, while multiple other patents remain valid and subsisting.⁹⁰

Such grants of patents not only run counter to the fundamental criterion of “novelty and non-obviousness” required in inventions, but also discounts the traditional knowledge of communities that forms the building blocks for these inventions. In addition, by granting economic and monopolistic benefits to the inventors, such patents simultaneously block and hamper access of communities to their own traditional knowledge (that forms the basis for the inventions), and they prevent these communities from economically exploiting their own resources.⁹¹ The rationale being that the so-called western inventions can, in effect, be commercialized by the eastern communities themselves. However, this opportunity is denied to the

⁸⁴ European Patent No. 436,257 (filed Dec. 20, 1990).

⁸⁵ *Bio-piracy of Traditional Knowledge*, TRADITIONAL KNOWLEDGE DIGIT. LIBR., <http://www.tkdlib.org/tkdlib/langdefault/common/Biopiracy.asp> (last visited Oct. 28, 2021).

⁸⁶ See Ho, *supra* note 8, at 439.

⁸⁷ U.S. Patent No. 4,556,562 (filed Mar. 19, 1984).

⁸⁸ U.S. Patent No. 5,401,504 (filed on Dec. 28, 1993).

⁸⁹ *Id.* at 1.

⁹⁰ See, e.g., U.S. Patent No. 5,897,865 (filed Jun. 30, 1997); ‘562 Patent.

⁹¹ Tanya Wyatt & Avi Brisman, *The Role of Denial in the ‘Theft of Nature’: Comparing Biopiracy and Climate Change*, 25 CRITICAL CRIMINOLOGY 325, 329 (2017).

communities on account of the bio-pirate patents of western corporations,⁹² who in turn fail to compensate the source of their revenues (*i.e.*, the communities).

To illustrate, Monsanto in the Indian agriculture sphere created and introduced the genetically modified variant of cotton—Bt cotton—in 2002. The bacterium used in Bt cotton is alleged to have been found in the Mahanadi village of Andhra Pradesh.⁹³ 2012 estimations recorded 95% of annual Indian cotton production to derive from Bt cotton seeds. The booming business of Bt cotton is evidenced by the fact that it forms about 40% of the total Indian seeds market.⁹⁴ Despite the revenues accruing to Monsanto—estimated at Rs. 34 billion per year⁹⁵—hardly any trickles down to the Mahanadi village.

The western value system believes eastern communities to be ill-equipped to convert knowledge into a commercially viable invention.⁹⁶ Ironically, the thematic discourse in LOF regarding thieving and pillaging by Jack falls prey to the notions of western hegemony it initially intended to parody. Rather than equip Jack with the tangible resources to build his own fire, the novel instils these capabilities solely with Ralph and Piggy. To illustrate, the primary, and at times sole, catalyst for building and maintaining the fire is traced to Ralph's insistence while the sole equipment (*i.e.*, Piggy's glasses) through which the fire can be made is available with Piggy.⁹⁷ The disproportionate distribution of capabilities is seen to eventually force Jack into stealing the fire for his group's survival.⁹⁸ Such depiction of characters' skillsets remain in the backdrop of Ralph and Piggy representing the developed countries and Jack standing in for the developing countries. Inevitably, the novel unintentionally builds a narrative where eastern communities are incompetent or inadequate in commodifying natural resources.

However, in stark contrast to the traditional approach, several other instances of sanctioned biopiracy involve a benefit sharing model aimed at compensating communities for their traditional knowledge—even though these models tend to be disproportionate and ineffective. In 1995, a specific genetic code (*i.e.*, Xa21) of the rice specimens from Mali was sequenced and

⁹² *E.g.*, PAMELA DAVIES ET AL., *INVISIBLE CRIMES AND SOCIAL HARMS* 172 (Palgrave Macmillan 2014).

⁹³ SHIVA, *supra* note 43, at xv.

⁹⁴ Sanjeeb Mukherjee, *Seed Companies Reap Rich Harvest on Bt Cotton Wave*, *BUS. STANDARD* (Jan. 20, 2013, 3:02 PM), https://www.business-standard.com/article/companies/seed-companies-reap-rich-harvest-on-bt-cotton-wave-112022300038_1.html.

⁹⁵ SHIVA, *supra* note 43, at xvi.

⁹⁶ Tanya Wyatt, *Invisible Pillaging: The Hidden Harm of Corporate Biopiracy*, in *INVISIBLE CRIMES AND SOCIAL HARMS* 161, 172 (Pamela Davies et al. eds., 2014); *see* Aoki, *supra* note 66, at 48–49.

⁹⁷ GOLDING, *supra* note 4, at 30.

⁹⁸ GOLDING, *supra* note 4, at 152–53.

patented by the University of California, Davis (“UC Davis”).⁹⁹ The Genetic Resource Recognition Fund (“GRRF”) was established at UC Davis to share the benefits arising out of commercialization of Xa21 with the Malian community. Under the benefit sharing model, a portion of the royalties arising from commercial usage of Xa21 would be used to fund the GRRF, which in turn would be used to fund fellowships at UC Davis for individuals from developing countries seeking to apply their studies towards the development of their respective countries.¹⁰⁰ Notably though, by 2004, the GRRF had not received any funds by way of the aforementioned benefit sharing model.¹⁰¹ Furthermore, the credibility of such a benefit sharing model is questionable upon understanding the actual net effective impact of the benefits onto the Malian communities. As in the case of the UC Davis patent, the fellowship was not guaranteed to be for the benefit of the Malian community or for individuals from the Malian community since it was open to all developing countries. Even more so, there was no understanding or empirical research that suggested the Malian community required the fellowship proposed under the benefit sharing model or was equipped to apply for it.¹⁰²

Another illustration of a benefit sharing model is the licensing of the Indian drug, “Jeevani,” that was created from extracts found in plants of the Kani tribe. The function of the drug was known and derived from the anti-fatigue properties of the plants (as known and used by Kani tribe).¹⁰³ In an effort towards equity, the Kerala Kani Community Welfare Trust Fund was set up to receive 50% of the license fees for Jeevani along with 1% of royalties accruing from sale of Jeevani.¹⁰⁴ Notably though, the benefit sharing arrangement was arrived at in absence of proper, meaningful consultations with the Kani tribe.¹⁰⁵ This raises concerns regarding the proportionality of the arrangement in comparison to the monetary benefits accruing to the corporations. More specifically, the arrangement completely overlooked other

⁹⁹ Anil K. Gupta, *Gene Patents and the Genetic Resource Recognition Fund* 6 (Indian Inst. of Mgmt., Working Paper No. WP2002-08-01, 2002), <https://faculty.iima.ac.in/assets/snippets/workingPaperpdf/2002-08-01AnilKGupta.pdf>; WIPO, *supra* note 70, at 24.

¹⁰⁰ ANIL K. GUPTA, WIPO-UNEP STUDY ON THE ROLE OF INTELLECTUAL PROPERTY RIGHTS IN THE SHARING OF BENEFITS ARISING FROM THE USE OF BIOLOGICAL RESOURCES AND ASSOCIATED TRADITIONAL KNOWLEDGE 84 (WIPO & UNEP eds., 2004).

¹⁰¹ Press Release, WIPO, Study Takes Critical Look at Benefit Sharing of Genetic Resources and Traditional Knowledge, WIPO Press Release PR/2004/373 (Feb. 10, 2004).

¹⁰² *See id.*

¹⁰³ UNDP, KERALA KANI COMMUNITY WELFARE TRUST: INDIA 3 (Equator Initiative Case Study Series 2012); GUPTA, *supra* note 99, at 103.

¹⁰⁴ *See* R.V. Anuradha, *Sharing with the Kanis: A Case Study from Kerala, India 2-8* (1998) (unpublished manuscript) (available at <https://www.cbd.int/doc/case-studies/abs/cs-abs-kanis.pdf>).

¹⁰⁵ GUPTA, *supra* note 99, at 117.

forms of revenues (besides from sale of Jeevani) including revenues arising from the production, sale, or licensing of derivatives.¹⁰⁶

The inadequate benefit sharing models and international frameworks to prevent the outright transfer and monopolization of Indian resources have resulted in the creation of India's Traditional Knowledge Digital Library ("TKDL"). The founding principles of the TKDL center on the protection of "Indian traditional medicinal knowledge and [prevention of] its misappropriation at International Patent Offices."¹⁰⁷ The TKDL has been instrumental in thwarting several bio-pirate patents, preventing more than 220 incorrect patent applications.¹⁰⁸ However, the more pertinent question in connection with the TKDL is the onus on India to create a deterrent system for actions that are ordinarily sanctioned by an international framework. While protecting the economic rights of intellectual property requires global harmonization, access rights are often left to the devices of territorial laws.

V. CONCLUSION

The reality of international intellectual property shows that the present framework and paradigm shift in the treatment of intellectual property is a byproduct of western biases. Similar to the ideology of western supremacy in LOF, the entire narrative of harmonized international laws was first conceptualized by colonizers and violently imposed upon their colonies with the aim of introducing them to law and order. The initial system relied on the plundering of eastern wealth for the enrichment of western societies. The advent of industrialization brought about the need for western societies to protect their industrialized wealth. Accordingly, the international framework shifted towards a protectionist attitude for industrially viable inventions, and disregarded the traditional knowledge of east that did not fit in the pre-determined molds of westernized intellectual property. Economic rights were prioritized over the right of access of developing eastern countries to resources.

Interestingly though, the current position of western society (helmed by the U.S.) greatly contradicts the U.S.' previous stance on intellectual property and right of access. As noted by American agencies,

¹⁰⁶ See Anuradha, *supra* note 104, at 13.

¹⁰⁷ *About TDKL*, TRADITIONAL KNOWLEDGE DIGIT. LIBR., <http://www.tkdil.res.in/tkdil/langdefault/common/Abouttkdl.asp?GL=Eng> (last visited Oct. 29, 2021).

¹⁰⁸ *Grant of Wrong Patents Prevented by TDKL in 220 Cases Till Date*, BUS. STANDARD (Dec. 5, 2015, 12:20 AM), https://www.business-standard.com/article/government-press-release/grant-of-wrong-patents-prevented-by-tdkl-in-220-cases-till-115120401168_1.html; accord Dr. V.K. Gupta, *Protecting India's Traditional Knowledge*, WIPO MAG. 5 (June 2011), https://www.wipo.int/export/sites/www/wipo_magazine/en/pdf/2011/wipo_pub_121_2011_03.pdf.

[W]hen the United States was still a relatively young and developing country, [...] it refused to respect international intellectual property rights on the grounds that it was freely entitled to foreign works to further its social and economic development.¹⁰⁹

The U.K. Commission also opined the need for a flexible approach towards economic rights in favor of socio-economic development. Per the U.K. Commission, “developing countries should not be deprived of the flexibility to design their IP systems that industrialized countries enjoyed in earlier stages of their own development.”¹¹⁰

These agencies realized the inherent disparate pace of development between western and eastern nations on account of colonization. While western states have had centuries of head-start to commence industrialization (often at the expense of their colonized eastern counterparts), the eastern states have only in recent past been provided the opportunity to not only make up for the underdevelopment caused by the colonizers, but also to proceed towards industrialization. To illustrate, the institutionalized de-industrialization of the Indian manufacturing sector during British colonialism¹¹¹ contributed towards the decline in India’s share of the world economy from 16% in the 1820s (pre-British colonization) to 4.2% in the 1950s (post-British colonization).¹¹²

Yet the modern-day reality of western states continues to overlook the deteriorating impact of colonization coupled with the socio-cultural benefits of intellectual property rights for eastern countries. The ethically immoral, yet legally permissible appropriation of eastern resources by western corporations (without due compensation or consultation), furthers the economic exploitation faced by eastern states at the hands of “their colonizers”. An economical narrative for such rights has been created at the detriment of eastern countries’ right to freely access and economically exploit their own resources.

¹⁰⁹ US. CONG., OFF. OF TECH. ASSESSMENT, INTELLECTUAL PROPERTY RIGHTS IN AN AGE OF ELECTRONICS AND INFORMATION 228 (U.S. Gov. Printing Off. 1986), <https://www.princeton.edu/~ota/disk2/1986/8610/8610.PDF>.

¹¹⁰ COMM. ON INTELL. PROP. RTS., WIPO, INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY 8 (2002), http://www.iprcommission.org/Papers/pdfs/final_report/ciprfullfinal.pdf.

¹¹¹ See JAMES M. CYPHER, THE PROCESS OF ECONOMIC DEVELOPMENT 80–81 (Routledge 4th ed. 2014).

¹¹² ANGUS MADDISON, DEVELOPMENT CENTRE STUDIES: THE WORLD ECONOMY 263 (OECD Publications 2003).