

**Biopiracy in the Philippines:
Why a Sui Generis System should be adopted in
Philippine Law for the Protection of
Traditional Knowledge:
An Argument from Entitlement Theory and a Libertarian
Conception of Justice**

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Abstract

Biopiracy occurs in the Philippines when pharmaceutical firms from developed nations patent endemic animals and plants whose medical properties have been harnessed by indigenous people for generations. Traditional knowledge is exploited by the existing patent system because of gaps in our legal framework: the ambiguity of the Intellectual Property Code, the lack of biopiracy laws, poor implementation of international treaties, and the absence of a system for documenting indigenous innovations. This paper discusses the underlying philosophical arguments that justify the patent regime, and argues that they rest on faulty premises and distorted views of justice. In particular, it explores three arguments that claim industrial processes and products are patentable, whereas traditional knowledge should not qualify for intellectual property protection. These are the arguments from moral arbitrariness, merit, and the common good. My aim in this paper is to apply a framework of entitlement theory and libertarian justice to expose the flawed reasoning implicit in these claims, and to develop a constructive framework for protecting traditional knowledge under current global standards. I conclude by outlining some policy recommendations that fill in some gaps in Philippine law that constitute the implementation of a *sui generis* system for protecting indigenous intellectual property rights.

Keywords: Biopiracy, Traditional Knowledge, Libertarian Justice, Entitlement Theory, *Sui Generis* System, Robert Nozick

Introduction

In 1979, a student from the University of Utah isolated a toxin called SNX-111 from the Philippine Sea snail (*Conus Magnus*) to study its chemical structure. He learned that one component, if applied to the human nervous system, could block the transmission of pain signals through synaptic connections. Other scientists eventually reported that the toxin was potentially one thousand times more powerful than morphine. Neurex Inc., an American pharmaceutical firm, recognized its medical potential and patented the snail within the next two decades, and developed a painkiller that has earned over \$80 million since. Unfortunately, the Filipino scientists and indigenous people who first discovered the toxin were never duly recognized nor compensated for providing their assistance throughout years of study.¹

This case has been labeled as an act of biopiracy, which refers to “*means by which corporations from the industrialized nations claim ownership of, free ride on, or otherwise take unfair advantage of the genetic resources and traditional knowledge and technologies of developing countries.*”² Biopiracy occurs when pharmaceutical companies patent endemic species of foreign countries, which is permitted by the World Trade Organization (WTO) in Article 27 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement. The agreement states that if an applicant can provide an “inventive step” in developing technology with industrial applications, he may be granted complete ownership over the processes and distribution of products directly connected to his work.³ This includes the genetic sequences of plants and animals whose properties they utilize.

The main reason why states such as the Philippines are unable to protect their own resources from being patented is because much of

¹ Michael A. Bengyawan, “Companies Rush to Patent Wildlife of the Philippines,” in *Eurasia Review*, 5 March 2019, 1.

² Lowell Bautista, “Bioprospecting or Biopiracy: Does the TRIPS Agreement Undermine the Interests of Developing Countries?” in *Philippine Law Journal*, Vol. 82 (1), 2007, 16.

³ World Trade Organization, “Trade-Related Aspects of Intellectual Property Rights,” in Article 27, Section 5, April 15, 1994.

its knowledge of endemic species is classified as indigenous or traditional knowledge, which is defined as “*a living body of knowledge passed on from generation to generation within a community. It often forms part of a people’s cultural and spiritual identity.*”⁴ Unfortunately, this definition does not fall neatly within the concept of intellectual property as used in the commercial intercourse of developed countries. Moreover, it fails to satisfy several requirements laid out by the TRIPS agreement to qualify for patents.⁵ A second reason is that traditional knowledge is perceived to be mere discoveries of nature, whereas industrial processes include the addition of an inventive step to the use of species.⁶ As a result, the commonly accepted principle is that (a) the intellectual property of pharmaceutical firms is patentable, (b) while the traditional use of endemic species is not. For the purposes of this paper, I shall refer to this as the “patentability claim.”

My objective in this paper is to argue that the patentability claim violates some principles of fairness and justice. I will illustrate that it rests on faulty philosophical arguments about the nature of property, and therefore fails to justify the existing patent regime. I will conclude by outlining some policy recommendations that constitute the implementation of a *sui generis* system which is authorized by the Intellectual Property Code of the Philippines, but is not being operationalized to the necessary extent to prevent biopiracy.

I. TRADITIONAL KNOWLEDGE IN PHILIPPINE LAW

The Convention on Biological Diversity acknowledges a special sub-class of traditional knowledge known as “genetic resources”, which refers to biological materials of plants and animals that contain genetic information of potential value.⁷ By international standards, knowledge of the endemic species of a country may qualify as traditional knowledge, which is classified in turn as a form of

⁴ Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions (2015), WIPO Publication No. 933 (E), Geneva Switzerland.

⁵ John A. Bryant and Linda La Velle, *Introduction to Bioethics*, 2nd Edition (West Sussex: Wiley and Sons, Ltd., 2019), 240.

⁶ Robert K. Paterson and Dennis S. Karjala, “Looking Beyond Intellectual Property In Resolving Protection of the Intangible Cultural Heritage of Indigenous Peoples,” in *Cardozo Journal of International and Comparative Law*, Vol. 11, 2003, 646-647.

⁷ Convention on Biological Diversity, Article 2, December 29, 1993.

intellectual property. Unfortunately, Philippine law does not grant traditional knowledge the same level of legal recognition.

Philippine Law recognizes the need to protect intellectual property in a broad sense in Section 2 of the Intellectual Property Code of the Philippines (R.A. 8293):

“Section 2. The state recognizes that an effective intellectual and industrial property system is vital to the development of domestic and creative activity, facilitates transfer of technology, attracts foreign investments, and ensures market access for our products.”⁸

Other sections stipulate rules concerning patents, knowledge transfer, and recognizing deserving individuals who have contributed to scientific innovation. Unfortunately, the code does not explicitly recognize traditional knowledge as intellectual property, thereby making it unclear whether it can be extended the same legal protection that even indigenous creators of artworks and literature currently enjoy—both of which are protected under R.A. 8293.

A further problem is that while the code authorizes the enactment of *sui generis* policies for protecting endemic species, there are no further mentions of concrete programs that can be implemented to accomplish this goal. The section that follows provides the first and only mention of *sui generis* protection in the entire Intellectual Property Code states,

“Section 22.4 Provisions under this subsection shall not preclude Congress to consider the enactment of a law providing sui generis protection of plant varieties and animal breeds and a system of community intellectual rights protection.”⁹

The conspicuous lack of programs has resulted in loose and lenient policies that have enabled foreign parties to exploit natural resources without facing any consequences. For instance, in 1993, Dr. Melvin Shemluck and Robert Nicholson—both from Massachusetts—were granted a ‘gratuitous permit’ by the Department of Environment and Natural Resources (DENR) to extract yew trees (*Taxus sumatrana*) that are endemic to Mt. Pulag in Benguet for their DNA analysis of medicinal plants in Asia. Yew trees contain taxol, a known anti-cancer

⁸ Intellectual Property Code of the Philippines (R.A. 8293), Section 2, 1988.

⁹ *Ibid*, Section 22.

agent, but are also used by the indigenous Ibalois and Kalanguyas who boil its bark into tea to cure internal ailments. The researchers promised in a letter written in good faith that they would share their learnings with the DENR. Unfortunately, they have never reported back since, and the DENR claims it does not know what happened to the specimen that were extracted.¹⁰

The Indigenous Peoples Rights Act (R.A. 8371) of 1997 provides more promising and inclusive guidelines on how to protect traditional knowledge. For example, Section 34 guarantees that indigenous people are entitled to intellectual property rights in relation to the unique aspects of their cultural heritage:

“Section 34. Right to Indigenous Knowledge Systems and Practices and to Develop Own Sciences and Technologies—ICCs/IPs are entitled to the recognition of the full ownership and control and protection of their cultural and intellectual rights. They shall have the right to special measures to control, develop, and protect their sciences, technologies, and cultural manifestations, including human and other genetic resources, seeds, including derivatives of these resources, traditional medicines and health practices, vital medicinal plants, animals and minerals, indigenous knowledge systems and practices, knowledge of the properties of fauna and flora, oral traditions, literature, designs, and visual and performing arts.”¹¹

While the act recognizes the need to protect genetic resources, it falls short of providing clear guidelines on its implementation. Thus, interested parties are left to assume that for traditional knowledge to qualify for protection, it must comply with the conventional requirements of intellectual property laid out in the TRIPS agreement. But this is problematic, because traditional knowledge is not meticulously documented in the way Western discoveries and inventions are. An indigenous person cannot prove he contributed an “inventive step” to the use of a species,¹² when an unnamed ancestor initiated the practice several generations prior. Moreover, the absence of clearly defined ownership makes it difficult to extend legal

¹⁰ Michael A. Bengyawan, “Intellectual and Cultural Property Rights of Indigenous and Tribal Peoples in Asia,” *Minority Rights Group International*, 2003, 27.

¹¹ R.A. 8371, “The Indigenous People’s Rights Act,” Section 34, 1997.

¹² Intellectual Property Code of the Philippines (R.A. 8293), Section 21, 1988.

protection to any single party, and so it appears implausible to claim that indigenous groups “own” the knowledge of the medicinal properties of plants in the same way that individual patent holders do. On this view, the TRIPS agreement can be accused of privileging Western nations whose scientific methods fit the requirements of patentability more than those of developing countries.¹³

Perhaps the law that comes closest to protecting traditional knowledge of species is Executive Order 247 (E.O. 247), otherwise known as the Bioprospecting Law, which regulates the search for plants and animals whose genetic information may be used to develop commercial drugs.¹⁴ It requires researchers to obtain the prior informed consent of indigenous leaders, to limit the extractions from the ecosystem, to pay royalties to local communities who conserve these resources, and to work with inter-agency bodies that monitor their activities.¹⁵ But the problem with E.O. 247 is that it only covers bioprospecting, which is conceptually and legally distinct from biopiracy.

The gaps in Philippine law can be summarized into two main problems. Firstly, the failure to define traditional knowledge as intellectual property disqualifies it from protection under the international patent regime. Secondly, while the law authorizes the enactment of a *sui generis* system to protect endemic species, there is a lack of policies that bring it about. I shall address the first problem in Parts II and III of this paper, and the second in Part IV.

II. THREE ARGUMENTS AGAINST SPECIAL PROTECTION FOR TRADITIONAL KNOWLEDGE

The patentability claim is pushed to the conclusion that protecting traditional knowledge as a form of intellectual property lacks an adequate legal basis. In this section, I shall examine three philosophical arguments that are made to support the patentability claim and explain why these are mistaken. They may be referred to as

¹³ Lowell Bautista, “Bioprospecting or Biopiracy: Does the TRIPS Agreement Undermine the Interests of Developing Countries?” in *Philippine Law Journal*, Vol. 82 (1), 2007, 14.

¹⁴ “Bioprospecting,” in *United Nations Development Programme*. <https://www.sdfinance.undp.org/content/sdfinance/en/home/solutions/bioprospecting.html>.

¹⁵ Executive Order 247, Section 2, 1995.

the argument from moral arbitrariness, the argument from merit, and the argument from the common good.

I shall tackle these arguments within the framework of a libertarian conception of justice, a philosophical position that emphasizes the protection of an individual's property,

*"...within his or her 'protected sphere' of rights, where no one else, government or individual, may interfere without consent."*¹⁶

In particular, I shall draw my responses from the works of Robert Nozick, who defended what he called a "historical" theory of entitlement, according to which a distribution of property that is acquired in a justifiable manner, or gained through voluntary exchange with persons who acquired it justly, is a fair distribution that no third party can disturb or interfere with.¹⁷ I shall illustrate why applying this framework to the plight of indigenous people offers persuasive reasons as to why traditional knowledge should qualify for intellectual property protection.

A. The Argument from Moral Arbitrariness

The first argument maintains that indigenous groups should not be entitled to special protection simply by virtue of luck; just because a breed of plants or animals is endemic to their ancestral land in a foreign country, it does not follow that they should automatically assume its ownership and prevent corporations from extracting them:

"Still, the question remains whether any group following this belief should retain exclusive rights to use information they have discovered with respect to people outside the group. If the information is freely available simply by visiting the group and observing their lifestyle without fraud or duplicity, preventing the visitor from using the information as the basis for creating a new and perhaps patentable product is equivalent to recognizing exclusive, perhaps group rights in the information...Something besides the rule of 'we discovered it so it is ours' is necessary unless

¹⁶ Jonathan Wolff, *An Introduction To Political Philosophy*, Third Edition (Oxford: Oxford University Press, 2016), 135.

¹⁷ John Christman, *Social and Political Philosophy*, Second Edition, Routledge Contemporary Introductions to Philosophy (Routledge: New York, 2018), 84.

*one takes the extreme step of embracing a full-fledged natural rights basis for intellectual property...*¹⁸

To overcome this argument, one must reply why moral arbitrariness does not disqualify a party from enjoying ownership over a resource. Nozick provides a theory as to why,

*“Whether or not people’s natural assets are arbitrary from a moral point of view, they are entitled to them, and to what flows from them.”*¹⁹

Nozick was referring to innate assets such as one’s natural intelligence, talents, or good looks. But the same principle applies to material possessions as well. If nothing morally significant could flow from what was arbitrary, then no aspect of human existence could be morally significant either. This is because every natural asset a person has is genetically but randomly determined when one out of billions of sperm cells fertilizes one out of millions of egg cells.²⁰ But if this were true, then no person would be entitled to any material possessions either, because acquiring personal property is subject to arbitrary factors and circumstances as well. Just because an object is arbitrarily acquired, it does not follow that one has no claim to it.

Nozick believes it is mistaken to judge how assets are currently distributed among people, and suggests that principles of justice should be applied historically instead. The past circumstances and actions of people determine their entitlement to their possessions.²¹ In his theory on the distribution of goods, Nozick provides three principles that cover the subject of justice in holdings and transfer:

“1. A person who acquires a holding in accordance with the principle of justice in acquisition is entitled to that holding.

2. A person who acquires a holding in accordance with the principle of justice in transfer, from someone else entitled to the holding, is entitled to the holding.

¹⁸ Dennis S. Karjala, “Biotech Patents and Indigenous Peoples,” in *Minnesota Journal of Law, Science, and Technology*, Vol. 7, Issue 2, 2006, 497.

¹⁹ Robert Nozick, *Anarchy, State, and Utopia* (Great Britain: T.J. Press Ltd, 1974), 228.

²⁰ *Ibid.*

²¹ *Ibid.* 155.

3. *No one is entitled to a holding except by (repeated) applications of 1 and 2.*²²

This theory can be applied to how indigenous communities acquire traditional knowledge. At some point several centuries ago, some indigenous persons happened to discover that brewing *ampalaya* (*Momordica charantia*) with *talong* (*Solanum melongena*) formed a concoction that remedied diabetes.²³ The lack of formal documentation makes it difficult to ascertain whether this was an accident or a result of experimentation. But there is likewise no evidence that indigenous ancestors stole the products of other tribes, or defrauded, or enslaved them to acquire this knowledge. Nothing suggests that such violations of justice in holdings were perpetrated, and assuming any of these happened without substantial evidence unwarranted. Given the limited available historical facts available, one may fairly say that the original inventors of the concoction were entitled to the rewards of their discovery.

As the original pioneers gradually passed away, the community decided it was in their best interests to transfer this knowledge to their descendants. The transfer may have been motivated by love of family, respect for tradition, or any other legitimate reason. This occurred repeatedly across several generations without any single party monopolizing this knowledge. No violation of justice in transfer arose because community members voluntarily chose whom they shared their knowledge with. If the historical distribution of traditional knowledge follows a pattern roughly congruent to that presented in this quasi-historical account, then traditional knowledge still rightfully belongs to their tribe. It is therefore unjust that the US government now owns the patent to *ampalaya* (US patent number 5,484,889) and the diabetic remedy itself (US patent number 5,900,240).²⁴ Whether or not they obtained this knowledge with the prior informed consent of the original creators, it is morally unfair for indigenous groups to be prevented from profiting from their collective wisdom.

²² *Ibid.* 151.

²³ Michael Bengwayan, "Philippine Biodiversity under Siege From Biopirates," in *Business Mirror*, 2018.

²⁴ *Ibid.*

It is here that the argument from moral arbitrariness comes undone, for it assumes that the basis of ownership is some baseless theory of good fortune. The argument fails because it disregards the historical aspect of acquisition. The possession of traditional knowledge is not a result of random luck; rather, it is a result of fair and free choices made by persons to transfer justly acquired knowledge across generations. Denying them ownership by privileging the technologically advantaged constitutes an assault on their individual liberties.

B. The Argument from Merit

The argument from merit attempts to prove that (a) pharmaceutical firms are entitled to patents as the fruits of their labor, and (b) that traditional knowledge is merely discovered in nature. Proponents of this argument write,

“In the case of drugs and medicines, there is no inventive step if the invention results from the mere discovery of a new form, or new property of a known substance which does not result in the enhancement of the known efficacy of that substance, or there mere discovery of any new property or new use for a known substance, or there mere use of a known process unless such known process results in a new product that employs at least one new reactant.”²⁵

This supports the “inventive step” standard as a fair basis for determining patentability, because modern technology either makes a substance more potent, or adds components to produce a new material.

Interestingly, the argument rests on libertarian foundations—particularly in the Lockean tradition. In the *Second Treatise*, Locke argues that natural resources become a man’s property when he has mixed it with his labor:

“The Labour of his Body, and the Work of his Hands, we may say, are properly his. Whatsoever then he removes out of the State that Nature hath provided and left it in, he hath mixed his Labour with,

²⁵ Makati Business Club, “Exploitation of Intellectual Property Rights by Pharmaceutical Companies in the Philippines,” in *Special Issue*, September 2017, 7-8.

and joined to it something that is his own, and thereby makes it his Property...For this Labour being the unquestionable Property of the Labourer, no Man but he can have a right to what that is once joined to, at least where there is enough, and as good left in common for others.”²⁶

This argument describes how scientists persevere by infusing genetic resources with the work from their hands, thereby transforming these resources into extensions of their labor, and hence, their property. In contrast, indigenous groups who merely discover the medicinal properties of plants do not add value to what nature already provides.

To respond to the argument from merit, one can point out that it misapplies libertarian justice and perpetuates other injustices instead. Nozick himself pointed out that Locke’s theory rested on a faulty premise. If a man owns Object A but no one owns Object B, it does not follow that mixing Objects A and B together awards him ownership of Object B:

“If I own a can of tomato juice and spill it in the sea so that its molecules (made radioactive, so that I can check this) mingle evenly throughout the sea, so do I thereby come to own the sea, or have I foolishly dissipated my tomato juice?”²⁷

Someone might defend the argument from merit by claiming the scientist’s key contribution is not the mixing, but the labor he imbued genetic resources with. That is to say, what makes labor unique is that it adds value to a previously unowned and less valuable object. Indigenous groups do not increase the value of an herb by brewing tea, but foreign researchers who synthesize it with chemical compounds clearly invent something new.

But even this rejoinder encounters difficulties: one may be entitled to the rewards that flow from the new substance, but not the original herb as it exists in nature. Regardless of whether industrial processes increase its potency, the plant is readily available to others for their personal medicinal use. If this is true, Locke’s theory is an argument to keep the incremental fruits of production at best, but not

²⁶ John Locke, “Second Treatise,” in *Two Treatises of Government*, Edited by Peter Laslett (Cambridge: Cambridge University Press, 1988) Section 27, 287-288.

²⁷ Robert Nozick, 1974, 175.

the original resource per se. Therefore, patents overcompensate scientists, for they grant ownership to both the benefits of labor and the naturally occurring species that scientists certainly did not create.²⁸

A weaker reading of the argument from merit suggests that patents can be justified by royalties or benefit-sharing agreements.²⁹

“The core of the biopiracy claim thus appears to be the unfair acquisition of indigenous knowledge and the absence of fair sharing of the profits that ultimately derive from developing it into a valuable product, rather than the availability of patents based on such knowledge. The problem to be addressed then becomes one of ensuring that traditional information is acquired in a fair and equitable way and that fair compensation is paid to the group from which the information derives.”³⁰

Royalties—on occasions they are actually shared—reward indigenous groups inadequately for sharing their knowledge. For example, African farmers have been recognized for improving the value of plant species through the continuous selection of the best-adapted varieties. Afterwards, foreign companies are reported to have collected the seeds the farmers produced and sold them back to for amounts that exceed the financial rewards previously conferred to them.³¹ Filipino farmers face a similar plight. Around one hundred fifty rice varieties stored at the International Research Rice Institute (IRRI) are used to breed artificial varieties which are patented by foreign entities and then sold back for planting.³² It is unlikely that the sharing of royalties sufficiently covers the costs of acquisition.

C. The Argument from the Common Good

²⁸ Jonathan Wolff. *An Introduction To Political Philosophy*. Third Edition. (Oxford: Oxford University Press, 2016), 142.

²⁹ Rosanna O. Ongpin and Ellyssa E. Timones. “A Legal Assessment of the Protection of Indigenous Knowledge Against Biopiracy in the Philippines and the ASEAN.” 2017, 2.

³⁰ Dennis S. Karjala. “Biotech Patents and Indigenous Peoples.” *Minnesota Journal of Law, Science, and Technology*. Volume 7, Issue 2. 2006, 498.

³¹ Moni Wekesa. “What is Sui Generis System of Intellectual Property Protection?” African Technology Policy Studies Network, 2006, 13.

³² Michael A. Bengwayan, “Companies Rush to Patent Wildlife of the Philippines,” in *Eurasia Review*, 5 March, 2019.

The third argument that denies protection for traditional knowledge draws inspiration from utilitarianism:

“The real policy basis for recognizing exclusive intellectual property rights derives from the public goods problem, namely, that failure to protect the fruits of intellectual creativity would result in fewer creative and socially desirable works being produced and made available to the public, because the effort involved in first producing the works is much greater than that involved in simply copying works already made.”³³

In other words, patents are incentives for scientists to develop medicines that will benefit the public good. But this argument relies on a contentious assumption: that the common good necessarily overrides the interests of individuals. While I cannot prove that this is objectively wrong, I will argue that its current justification is insufficient. Nozick would respond to this by pointing out that the problem with utilitarianism is that it fails to take the distinction between persons seriously:

“But why may not one violate persons for the greater social good? Individually, we sometimes choose to undergo some pain or sacrifice for a greater benefit or to avoid a greater harm: we go to the dentist to avoid worse suffering later; we do some unpleasant work for its results; some persons diet to improve their health or looks; some save money to support themselves when they are older. In each case, some cost is borne for the sake of the greater overall good. Why not, similarly, hold that some persons have to bear some costs that benefit other persons more, for the sake of the overall social good? But there is no social entity with a good that undergoes some sacrifice for its own good. There are only individual people, different individual people, with their own individual lives. Using one of these people for the benefit of others, uses him and benefits others. Nothing more.”³⁴

³³ Robert K. Paterson and Dennis S. Karjala, “Looking Beyond Intellectual Property In Resolving Protection of the Intangible Cultural Heritage of Indigenous Peoples,” in *Cardozo Journal of International and Comparative Law*, Vol. 11, 2003, 647.

³⁴ Robert Nozick, 1974, 32-33.

The argument from the common good might be saved by the claim that indigenous groups are also beneficiaries of the public domain. They are therefore obligated, in the spirit of fairness, to relinquish their resources to those who can use them better:

*“Indigenous cultures also benefit from the broad and vibrant public domain that has resulted from the time-limited nature of property rights. Many drugs, tools, and industrial processes that were once patented are now free all over the world for use or further adaptation by others, including indigenous peoples.”*³⁵

Undoubtedly, this modification draws inspiration from the works H.L.A. Hart³⁶ and John Rawls,³⁷ who argued that the acceptance of benefits creates the obligation to contribute to the system that made them possible in the first place, the refusal of which constitutes an act of free-riding.

This is a powerful argument, but it suffers from two major flaws. Firstly, it is empirically untrue, because patents have been misused and abused to extend monopolies, increase drug prices, and delay the efforts of competitors to release more affordable generic medicines.³⁸ The second flaw is that there is a moral distinction between passively receiving benefits that result from the activities of other people, and actively accepting them.

Nozick gives the example of a person who gives someone a book, and then grabs his money to pay for it. This would be immoral, even if the latter had nothing better to spend his money on. His consent must be secured in advance, and he cannot be presented a *fait accompli* demanding that he pays his “fair share.”³⁹ Furthermore, claiming that indigenous people accept the benefits of Western medicine misconstrues how they exercise their autonomy. In several ways, they remain isolated from modern society and technology, preferring traditional medicines over commercial drugs. The argument from the common good imposes obligations based on the premise that indigenous groups freely accept and use foreign medicine. But even this assumption is often unwarranted.

³⁵ Robert K. Paterson and Dennis S. Karjala, 2003, 649.

³⁶ HLA Hart, “Are there any natural rights?” *Oxford Review*. No 4. 1967.

³⁷ John Rawls, *A Theory of Justice*, Cambridge: Harvard University Press, 1971.

³⁸ David Branigan, “Patent Abuse a Leading Cause of High Drug Prices in the US,” in *Intellectual Property Watch*, March 3, 2018.

³⁹ *Ibid*, 95.

III. AN OBJECTION AGAINST PATENTABILITY

In the interest of developing a constructive framework, I shall deal with the objection that traditional knowledge satisfies neither legal nor moral standards for receiving intellectual property protection. This criticism is often raised against the concept of community-wide intellectual property rights, which are recognized as an essential part of *sui generis* systems.

Firstly, traditional knowledge can neither be dated nor attributed to one individual, since it is passed on through generations within a community. Secondly, it is not documented in written form.⁴⁰ The following passage illustrates this objection:

“Suppose we are dealing with a process to prepare a medicine that heals infections, long used by a traditional community somewhere in Africa, consisting of an infusion of seeds and leaves of native plants. Would that process be patentable? At first glance, the answer is an affirmative. But through a deeper analysis, we realize that a patent protection would not be available for this kind of invention. First, the invention is not dated, so it is not possible to determine a critical date. As it would have been used for a long period of time, it would lack novelty. Also, the inventor is not determined, since it is knowledge that belongs to the whole community. Patents are granted to individuals, or a small group of them, not to an undetermined group of people.”⁴¹

The first problem, that traditional knowledge cannot be dated or attributed to a specific ancestor, is addressed by the principle of just transfer. Let us assume that a group of indigenous persons, A_x , B_x , and C_x , use an herb to treat their wounds. They acquired this knowledge from their parents, A_{x-1} , B_{x-1} , and C_{x-1} , who transferred knowledge that was passed on by *their* parents, A_{x-2} , B_{x-2} , and C_{x-2} , and so on. It can be traced all the way back to ancestors A_0 , B_0 , and C_0 —the original group who first discovered the healing properties of the herb. This schema is

⁴⁰ Eliana Torelly de Carvalho, “Protection of Traditional Biodiversity-Related Knowledge: Analysis of Proposals for the Adoption of a *Sui Generis* System,” in *Journal of Environmental and Sustainability Law*, Missouri Environmental Law and Policy Review, Volume 11, Issue 1, 2003, 39.

⁴¹ *Ibid.*, 53.

representative of how traditional knowledge survives; it is an intangible good that takes the form of inheritance, an arbitrary but legitimate method of acquisition.⁴² Entitlement theory does not require an individual to claim just desert in order to validate his inheritance. A benefactor may do whatever he pleases with that knowledge; he need not even be morally upstanding or highly productive to deserve it. He must simply prove that he acquired it justly, which is generally assumed of acts of inheritance.⁴³ Therefore, if A_x , B_x , and C_x are entitled to inherited knowledge, then it is for them to decide whom to transfer it to. And if a group of three can collectively be recognized as co-owners, then in principle, there would be nothing inherently wrong with extending the number to a hundred. Community intellectual property rights are not morally grounded in the number of people who co-own a resource, but how they historically came to share this knowledge with each another.

The second problem—that traditional knowledge is not documented in written form—is slightly more challenging. Indigenous groups are faulted for failing to record methodologies or discoveries as contemporary innovators or scholars do. One reply is that it would be unjust to demand documentation in a form that was historically absent within a community, because this requirement would *prima facie* disqualify indigenous people from ever receiving the equal protection guaranteed by the system. Realizing the need for such exceptions, the WIPO recognizes in its handbook that,

“2.262 The relationship between tradition, modernity, and the marketplace may not, however, always be a happy one. Indigenous and traditional communities express concerns that the distinct and diverse qualities of the world’s multiple cultural communities are threatened in the face of uniformity brought on by new technologies and the globalization of culture and commerce.”⁴⁴

The WIPO adjudicates such problems based on Article 6*bis* of the Paris Convention for the Protection of Industrial Property.

⁴² Robert Nozick, 1974, 158.

⁴³ Dale Murray, “Robert Nozick: Political Philosophy,” in *Internet Encyclopedia of Philosophy*, <https://www.iep.utm.edu/noz-poli/>

⁴⁴ World Intellectual Property Organization, “Fields of Intellectual Property Protection,” *WIPO Intellectual Property Handbook: Policy, Law, and Use*, 56, 2004.

According to this section, trademarks can be denied to parties who replicate a “well-known” mark that is commonly attributed to a specific party, even when there is no prior documentation.⁴⁵

If trademarks—which are considered to be forms of intellectual property—can be granted special protection without formal documentation, then this can be applied to traditional knowledge as well. While traditional knowledge may not have been formally documented by the rigorous standards of the TRIPS agreement, it has nevertheless been recorded in different ways. Common knowledge, good faith, word of mouth, anthropological and cultural studies, or historical accounts may all corroborate the origin of a practice to one particular community. These historical sources provide essentially the same information that written documentation does, so there is no compelling reason as to why these cannot be collectively recognized as sufficient evidence for originality.

IV. THE IMPLEMENTATION OF A *SUI GENERIS* SYSTEM IN PHILIPPINE LAW

Having argued that the patentability claim rests on defective philosophical assumptions, and that a plausible framework for intellectual property can be extended to traditional knowledge, I now turn to explaining how protection can be enforced by means of a *sui generis* system. This system is defined as “*the creation of a new law or the establishment of international norms that would afford protection to intellectual property dealing with genetic resources—or biodiversity—and the biotechnology that might result.*”⁴⁶ The legal basis for its adoption can be found in Article 27, Section 2 of the TRIPS Agreement:

“2. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ‘ordre public’ or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not

⁴⁵ World Intellectual Property Organization, “Paris Convention for the Protection of Industrial Property.”

⁴⁶ International Intellectual Property Institute, “Is a *Sui Generis* System Necessary? Benefit Sharing Agreements,” New York, January 14, 2004.

made merely because the exploitation is prohibited by their law."⁴⁷

The agreement allows signatory states to exempt certain endemic species from patentability; all that must be proven is that the effort will "*protect human, animal or plant life.*" More broadly, the agreement grants these states presumed ownership and authority to govern the use and protection of its genetic resources, including setting the terms by which locals can agree to work with foreign companies that are interested in developing commercial drugs. These terms include the protection of endemic species by patents as well as *sui generis* policies that are designed to preserve traditional knowledge. I shall now outline some examples of how other countries have managed to take advantage of this statute, all of which can be replicated in the Philippines by virtue of the Intellectual Property Code already authorizing the creation of a *sui generis* system.

A. Database Systems

I previously argued that moral arbitrariness and good fortune do not disqualify indigenous people from entitlement and property rights. In order to establish their claims to property, indigenous people can supplement existing records of their knowledge⁴⁸ through the creation of an inventory or database as suggested by the WIPO,⁴⁹ based on Article 39 of the TRIPS agreement, to codify traditional knowledge as "data." While the difference in terms appears to be merely semantic and procedural, data exclusively enjoys tangible legal benefits such as protection from "*unfair commercial use.*"⁵⁰

Databases enforce claims to knowledge that is considered novel if "*the information based upon it has not yet reached the market.*"⁵¹ Whereas in status quo a commercial medicine is patentable while the traditional knowledge behind it is not, database rights would treat the

⁴⁷ World Trade Organization, "Trade-Related Aspects of Intellectual Property Rights," Article 27, Section 5, April 15, 1994.

⁴⁸ Eliana Torelly de Carvalho, 2003, 63.

⁴⁹ Graham Dutfield, "Protecting Traditional Knowledge and Folklore: A Review of Progress in Diplomacy and Policy Formulation," 2003.

⁵⁰ World Trade Organization, "Trade-Related Aspects of Intellectual Property Rights," Article 39, Section 3, April 15, 1994.

⁵¹ Indigenous Knowledge Worldwide, *Databases to Protect Traditional Knowledge?* November/December 2002, Special Issue.

latter like trade secrets that fall under the definition of protected intellectual property, effectively blocking foreigners from patenting resources because knowledge of their use will have been trademarked.⁵²

Similar initiatives have been undertaken by non-governmental organizations (NGOs) in India, such as The Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) and the People's Biodiversity Registers Program.⁵³ Filipinos who work with indigenous communities have commenced discussions on similar efforts. For example, The Tebtebba Foundation joined WIPO panels and invited indigenous representatives, who expressed willingness to patent their knowledge provided that they retain ownership rights after research has been published.⁵⁴

Some indigenous groups object to cataloging their knowledge out of fear that this would only make it easier for foreigners to exploit their local customs.⁵⁵ But worries have been assuaged by providing commercial parties with restricted access to these databases, similar to those containing trade secrets. For example, the Subanen community in the Philippines used encryption tools and gave different levels of access in electronically documenting their traditional knowledge and use of endemic species.⁵⁶ Their data bank likewise allows them to regulate the spread of information outside of their community.

B. Benefit-Sharing

I have criticized how patents overcompensate pharmaceuticals by granting ownership over resources that exist in nature, not just the benefits that flow from newly synthesized compounds. This can be remedied by a system that rewards collaboration, rather than one that

⁵² Terri Janke, "Managing Indigenous Knowledge and Indigenous Cultural and Intellectual Property," in *Australian Academic & Research Libraries*, 36:2, 101.

⁵³ Graham Dutfield, 2003.

⁵⁴ Adithi Koushik, "Indigenous Knowledge Databases: Is It Something To Be Concerned About?" in *Intellectual Property Watch*, 2018.

⁵⁵ *Ibid.*

⁵⁶ Yovana Reyes Tagle, "The Protection of Indigenous Knowledge Related to Biodiversity: The Role of Databases," in *Sylff.org*, 133-134.

allows pharmaceuticals to monopolize species. Fortunately, the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore has declared principles that govern the shared use and benefits of genetic resources.⁵⁷

Under these guidelines, indigenous people are identified as relevant stakeholders who should be included in negotiating contracts involving benefit-sharing for bioprospecting activities. The link between traditional knowledge and genetic resources justifies their participation,⁵⁸ especially when the Convention on Biological Diversity affirms that much of our understanding of genetic resources is owed to traditional knowledge.⁵⁹ This implies that the ownership patents bestow on pharmaceuticals is not entirely deserved, and material rewards should be shared in the spirit of fairness. Furthermore, the benefits that are shared are not limited to royalties. The Bonn Guidelines drafted in 2002 identifies several policies that expand the definition of benefits: sharing of research results, education and training, transferring technology to the provider of traditional knowledge, institutional capacity building, human resources to strengthen administration, contributions to the local economy, and food and livelihood security benefits.⁶⁰

Sui generis laws requiring benefit-sharing have been implemented in several countries around the world.⁶¹ Peru's Law No. 27, 811 of 2002 ensures that the use of traditional knowledge leads to the payment of equitable compensation into a national Fund for Indigenous Development. Thailand passed the "Thai Traditional Thai Medicinal Intelligence Act" which allows its ministry of public health to declare formulas of traditional Thai medicine as national formulas. Portugal's Decree-Law No. 118 of 2002 protects against the

⁵⁷ WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore. "Genetic Resources: Draft Intellectual Property Guidelines For Access and Equitable Benefit Sharing: Updated Version," Geneva, December 6-10, 2010.

⁵⁸ *Ibid.*

⁵⁹ Convention on Biological Diversity, *Introduction to Access and Benefit Sharing*, Secretariat of the Convention on Biological Diversity, 2010, 2.

⁶⁰ Convention on Biological Diversity, *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of Their Utilization*, Secretariat of the Convention on Biological Diversity, 2002, 19-20.

⁶¹ Pradeep Dua, "Intellectual Property Rights: Need for a *Sui Generis* Regime for non-codified Traditional Medicine in India," in *Department of AYUSH, Ministry of Health & Family Welfare*, Government of India, 119-120.

“commercial or industrial reproduction and/or use” of traditional knowledge developed by communities.⁶²

The scope of the Philippines’ Indigenous People’s Act is specific enough to outline benefit-sharing policies similar to those abroad.⁶³ Similarly, the Intellectual Property Code may be used to protect traditional healing methods as trade secrets,⁶⁴ preventing third parties from using this knowledge without compensation.

C. Community Intellectual Property Rights

Section 22 of The Intellectual Property Code authorizes the creation of a “system of community intellectual rights protection” to supplement *sui generis* protection policies, but the Philippines has unfortunately not applied this for the conservation of genetic species to the extent that other countries have. An ideal model would be Costa Rica’s Biodiversity Law (1998), which protects “*sui generis* intellectual community rights” by providing incentives and rewards for environmental conservation (Article 10), creating eleven Conservation Areas or territorial units under the stewardship of communities (Article 28), and creating the National System of Conservation Areas (SINAC)—a decentralized organization that promotes sustainability by consulting with local groups.⁶⁵

The law gains its efficacy from involving entire communities in conservation efforts that recognize indigenous locals as stewards of knowledge. As holders of intellectual community rights, they are given the authority to make decisions concerning the use and extraction of different species. Beyond securing prior informed consent, the collaboration between national and local government units improves the manpower and logistics necessary to conserve genetic resources.⁶⁶ Costa Rica has been internationally recognized for maintaining a system that allows private entities to conduct scientific research but simultaneously protecting the rights of the local community.

The Intellectual Property Code of the Philippines already authorizes the creation of community-level rights,⁶⁷ but must

⁶² *Ibid.*

⁶³ Christopher E. Cruz, “Intellectual Property of Indigenous Peoples (IP of IP): Challenges in Protecting Traditional Knowledge in the Philippines,” 2017, 18-19.

⁶⁴ *Ibid.*

⁶⁵ Law 7788, Biodiversity Law of Costa Rica.

⁶⁶ “Costa Rica’s Biodiversity Law,” in FuturePolicy.org.

⁶⁷ Intellectual Property Code of the Philippines (R.A. 8293), Section 22, 1988.

operationalize this under an extended intellectual property umbrella that brings local communities, genetic resources, conservation programs, and traditional knowledge together.

Conclusion

In this paper, I have discussed four main points concerning the problem of biopiracy in the Philippines. Firstly, gaps in our legal framework render the law unclear and ambiguous on the level of protection that can be afforded to traditional knowledge, thereby enabling foreign pharmaceuticals to exploit genetic resources without facing legal consequences. Secondly, the global patent regime rests on what I have referred to as the patentability claim—that only commercial drugs and industrial processes are patentable, whereas traditional knowledge concerning the use of species is not. I have argued that this claim rests on flawed philosophical arguments about arbitrariness, merit, and the common good. Thirdly, I have argued that even under global standards, traditional knowledge can qualify for intellectual property protection. Finally, I have outlined some modest policies that constitute the adoption of a *sui generis* system such as the creation of database rights, the provision of more benefit-sharing agreements, and the implementation of more community intellectual property programs.

Throughout this discussion, I hope an implicit but crucial point has been made clear: that behind the legal obstacles that have been discussed lie philosophical disputes that need to be settled. These are problems concerning the nature of property, fairness, justice, and rights. Unless a stronger case can be made that indigenous groups are the victims of a fundamentally unjust patent system that rests on false philosophical pretenses, it will be more challenging to arm legislators with the moral and political force they need to fill in the gaps of our legal framework.

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