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Patentability of Traditional Medicinal Knowledge from Below: An Account of the Batwa Indigenous Peoples' Perspectives

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ABSTRACT

This article contributes to ongoing debates on the legal protection of traditional knowledge (TK) by examining how Batwa Indigenous Peoples in the Democratic Republic of Congo (DRC) assess patents as potential tools for protecting traditional medicinal knowledge (TMK). Drawing on a qualitative study, this article investigates how Batwa peoples – after a community discussion on legal options for protecting TMK – expressed a preference for individual or collective patent ownership over other mechanisms such as benefit-sharing or a sui generis intellectual property system. The findings reveal sustained interest in patents as potential sources of recognition, dignity, and economic autonomy, thereby complicating dominant assumptions regarding their inadequacy for protecting TMK. By foregrounding the Batwas' own perspectives in a field often dominated by valuable, if sometimes prescriptive, expert opinion, this sociolegal study argues for a more nuanced and empirically grounded debate on the legitimacy, desirability, and efficiency of legal mechanisms for protecting TK.

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INTRODUCTION

Intellectual property law scholars, transnational environmental lawyers, and international institutions have long debated how traditional knowledge (TK), a cumulative body of know-how, practices, and beliefs developed by Indigenous Peoples and Local Communities (IPLCs), should be legally protected. Their interventions have primarily focused on biopiracy — understood as the misappropriation of IPLCs' knowledge by external actors who develop food, cosmetic, or pharmaceutical products from that knowledge and subsequently protect them through intellectual property rights, often patents, without properly acknowledging IPLCs' contributions.¹

One of the most enduring controversies² in this field is whether patents, the traditional legal mechanism for protecting inventions by granting exclusive rights to rights-holders, can or should be used to protect TK.³ Some scholars argue that patents may be useful for TK

protection.⁴ However, most emphasise that patent law is structurally ill-suited for this purpose.⁵ This critical literature highlights that patents reflect Western, individualistic, and commodifying views of innovation that often conflict with TK's collective and relational nature.⁶ These

¹ Chris Hamilton, 'Biodiversity, Biopiracy and Benefits: What Allegations of Biopiracy Tell Us about Intellectual Property' (2006) 6(3) *Developing World Bioethics* 159; Vandana Shiva, 'Bioprospecting as Sophisticated Biopiracy' (2007) 32 *Signs: Journal of Women in Culture and Society* 307.

² Thomas Samuel Kuhn, *The Structure of Scientific Revolutions* (University of Chicago Press 2012) 23.

³ Ruth Lade Okediji, 'A Tiered Approach to Rights in Traditional Knowledge' (2019) 58 *Washburn Law Journal* 271, 272.

⁴ Anik Bhaduri, 'Communities as Inventors: Rethinking Positive Protection of Traditional Knowledge through Patents' (2023) 26(3) *Journal of World Intellectual Property* 414, 416; Kaushiki Das, 'The Global Quest for Green Gold: Implications of Bioprospecting and Patenting for Indigenous Biore-sources and Knowledge' (2020) 6(1) *Society and Culture in South Asia* 74, 89; Emeka Polycarp Amechi, 'Using Patents to Protect Traditional Knowledge on the Medicinal Uses of Plants in South Africa' (2015) 11 *Law, Environment and Development Journal* 51, 52; Jay Erstling, 'Using Patents to Protect Traditional Knowledge' (2009) 15(2) *Texas Wesleyan Law Review* 295; Sophia F Espinosa, 'Patent Law and the Protection of Traditional Knowledge' (2012) 1 *NTUT Journal of Intellectual Property Law and Management* 159; Ikechi Mgbeoji, 'Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Bio Piracy?' (2001) 9 *Indiana Journal of Global Legal Studies* 163, 164; Lester I Yano, 'Protection of the Ethnobiological Knowledge of Indigenous Peoples' (1993) 41(2) *UCLA Law Review* 443, 486.

⁵ Petra Ebermann, *Patents as Protection of Traditional Medical Knowledge?: A Law and Economics Analysis* (Intersentia 2012) 101-134.

⁶ Daniel Robinson, Miri Raven and Simon Lumsden, 'Epistemic Injustice: Intellectual Property, Biodiversity and Traditional Knowledge' in Matthew Rimmer, Caroline Ncube and Bitu Amani (eds), *The Elgar Companion to Intellectual Property and the Sustainable Development Goals* (Edward Elgar Publishing 2024) 458-480. See also Albane Geslin, 'Populations autochtones et brevetabilité du vivant' in *Acteurs privés et droit du vivant* (Centre d'études et de recherches internationales et communautaires/CERIC 2009) 143-144; Chidi Oguamanam, 'The Protection of Traditional Knowledge: Towards a Cross-Cultural Dialogue on Intellectual Property Rights' (2004) 15 *Australian Intellectual Property Journal* 34, 45.

issues arise especially in debates about access to medicines,⁷ open science,⁸ and environmentally friendly technologies.⁹

In response, two complementary approaches are often presented as preferable alternatives to patents. The first is benefit-sharing, established under Article 5(5) of the Nagoya Protocol.¹⁰ This approach promotes the fair and equitable distribution of monetary and non-monetary advantages to IPLCs when innovations are based on their TK.¹¹ The second approach is the *sui generis* model (meaning ‘of its own kind’), which aims to develop a legal

framework tailored specifically to protect TK in ways aligned with Indigenous epistemologies. An example of progress in this direction is the World Intellectual Property Organisation (WIPO)’s *Treaty on Intellectual Property, Genetic Resources and Traditional Knowledge* of May 24, 2024. If ratified, this treaty will require disclosure of the origin or source of TK in patent applications,¹² thereby supporting implementation of the Nagoya Protocol.

Yet, little empirical research examines how IPLCs *themselves* assess these legal options. This article aims to fill this gap, focusing on traditional medicinal knowledge (TMK), a TK subset relating to plants, animals, and micro-organisms with medicinal properties. Rather than endorsing either legal camp, the article asks how IPLCs view patents alongside other options, and what these views reveal about epistemic legitimacy in debates surrounding the protection of TMK. To guide this analysis, it mobilises Lavigne and Droz’s concept of ‘key shared values’ (*valeurs phares partagées*), which prioritises lay evaluative frameworks over expert-driven prescriptions, and brings IPLCs’ perspectives into dialogue with legal scholarship.¹³

This article draws on a field study conducted with Batwa communities living in South Kivu in eastern Democratic Republic of Congo (DRC), where histories

⁷ Tolulope Anthony Adekola and Faith O Majekolagbe, ‘Human Rights Law, Intellectual Property and Vaccine Nationalism: Lessons for the Post-COVID-19 World’ (2023) 29(2) *Australian Journal of Human Rights* 375; E Richard Gold, ‘Patents and Human Rights: A Heterodox Analysis’ (2013) 41 *Journal of Law, Medicine and Ethics* 185; Yann Joly, ‘Accès aux médicaments: le système international des brevets empêchera-t-il les pays du tiers monde de bénéficier des avantages de la pharmacogénomique’ (2003) 16(1) *Les Cahiers de Propriété Intellectuelle* 177.

⁸ Sarah Ali-Khan, Antoine Jean and E Richard Gold, ‘Identifying the Challenges in Implementing Open Science’ (2018) 2(5) *MNI Open Research* 1.

⁹ Kilian Raiser, Henriette Naims and Thomas Bruhn, ‘Corporatization of the Climate? Innovation, Intellectual Property Rights, and Patents for Climate Change Mitigation’ (2017) 27 *Energy Research and Social Science* 1, 2.

¹⁰ The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (adopted 29 October 2010, entered into force 12 October 2014).

¹¹ Elisa Morgera, Elsa Tsioumani and Matthias Buck, *Unravelling the Nagoya Protocol: A Commentary on the Nagoya Protocol on Access and Benefit-Sharing to the Convention on Biological Diversity* (Brill 2014).

¹² See Art 3.1 and 3.2 of the Treaty on Intellectual Property, Genetic Resources and Traditional Knowledge, World Intellectual Property Organisation, GRATK/DC/7, 24th May 2024. See also Frédéric Perron-Welch, ‘Striking a Balance between Innovation and Tradition in the Global Patent System’ (2024) 19(10) *Journal of Intellectual Property Law and Practice* 748.

¹³ Jean Claude Lavigne and Yvan Droz, *Éthique et développement durable* (Karthala 2006) 55.

of displacement, socio-economic precarity, and insecurity shape everyday life. Participants first engaged in deliberative discussions focused on the three legal approaches to protecting TMK: benefit-sharing, *sui generis* protection, and patents. They were then invited to reflect individually and collectively on whether patents constituted, in their view, a relevant tool for protecting TMK. This focus on patents is justified by the scientific controversy¹⁴ surrounding these tools. Accordingly, this article does not aim to document Indigenous normative systems governing TMK, nor to assess their compatibility with dominant intellectual property frameworks.¹⁵ Rather, it aims to examine how Batwa participants evaluated patent-based protection once presented with accessible information regarding existing legal options.

Contrary to dominant assumptions within the literature, participants overwhelmingly supported patents as tools for protecting TMK. For many participants, patents were associated with recognition, dignity, and economic autonomy in insecure settings. The following discussion acknowledges, however, that the appeal these tools hold for Batwa participants does not negate the structural critiques long directed at patent regimes. The research highlights this persistent tension, with reference to an Australian case study in which some IPLCs attempted to patent their TMK, and reflects on the practical capacity of patent systems to deliver economic and symbolic outcomes.

This article contributes to ongoing debates on the legal protection of TK in three ways: (1) it centres the views of IPLCs, often absent from debates dominated by legal scholars; (2) it invites reconsideration of dominant assumptions about legal protection mechanisms by revealing divergences between IPLCs' perspectives and expert-driven accounts; and (3) it offers rare empirical insight from African Indigenous communities, offering an often missing counterweight to American and Oceanian research.

The next section describes the methodology and fieldwork context. The article then discusses participants' perspectives on patents and other legal mechanisms, while the following section situates these findings within broader debates on intellectual property, recognition, and epistemic legitimacy. After presenting the study's limitations, the article concludes by outlining a new research agenda.

1 Methodology

This article adopts an exploratory sociolegal approach that combines documentary research with qualitative fieldwork conducted in July and August 2024 among Batwa Indigenous communities in the Kabaré territory in South Kivu. In the DRC, Batwa communities are commonly referred to as 'Pygmies'. Although this term has historically pejorative connotations,¹⁶ it is widely used in public discourse, including

¹⁴ Okediji (n 3) 275; Yves Gingras, *Controverses: accords et désaccords en sciences humaines et sociales* (CNRS Éditions 2014).

¹⁵ Val Napoleon and others, *Indigenous Intellectual Property: An Interrupted Intergenerational Conversation* (University of Toronto Press 2024).

¹⁶ Atlas monographique des Peuples Autochtones Pygmées (2025) (unpublished); Véronique Dasen, 'Nains et pygmées' in Francis Prost and Jérôme Wilgaux (eds), *Penser et représenter le corps dans l'Antiquité* (Presses Universitaires de Rennes 2006) 48.

in legislation,¹⁷ and reappropriated¹⁸ by the participants in this study.

Although demographic estimates remain uncertain, recent data suggest that approximately 53,900 Pygmies live in South Kivu, including around 9,000 in Kabaré.¹⁹ While increasingly sedentary due to development interventions, some groups continue to maintain semi-nomadic practices. Their livelihoods are primarily based on hunting, fishing, agriculture, and gathering.²⁰

Before the 1970s, most relied on the forest as the basis of their livelihood, sourcing food and medicinal plants from it. Since then, they have been removed from this ‘natural environment’ following its conversion into a protected area, now known as the *Kahuzi Biéga National Park*.

1.1 Rationale for Site and Participant Selection

Three considerations informed the selection of the research site and population. First, the DRC constitutes a distinctive case in Africa because it formally recognises Indigenous Peoples through ‘*Law No. 22/030 of 15 July 2022 on the Protection and Promotion of the Rights*

of Indigenous Pygmy Peoples’. By focusing on Indigenous Peoples whose status is formally acknowledged in domestic law, I seek to sidestep debates about whether Indigenous Peoples exist as a legal category in Africa.²¹ Second, Indigenous Peoples are often associated with extensive TMK,²² and fieldwork confirmed that Batwa communities possessed such knowledge, making them particularly relevant for a study examining perceptions of legal protection mechanisms for TMK. Third, the research benefited from pre-existing local contacts established through FHI 360, an international NGO active in eastern DRC, which facilitated initial contact with the Indigenous association RAPHY (*‘Réseau des Associations Autochtones Pygmées’*). FHI 360 had no role in the design, conduct, or analysis of the study.

Two local translators fluent in Mashi, Kiswahili, and French assisted during the fieldwork. Prior to data collection, a preparatory session was conducted to discuss the legal concepts and research protocol used in the study. This session followed the same structure later used during community discussions²³ with participants and aimed to ensure that the legal options presented were explained in balanced and accessible terms.

¹⁷ See the ‘Loi n°22/030 du 15 juillet 2022 portant protection et promotion des droits des peuples autochtones pygmées’ [Law No 22/030 on the Protection and Promotion of the Rights of Indigenous Pygmy Peoples (Democratic Republic of Congo)].

¹⁸ Adam Daniel Galinsky and others, ‘The Re-appropriation of Stigmatizing Labels: The Reciprocal Relationship between Power and Self-Labeling’ (2013) 24 *Psychological Science* 2020, 2021.

¹⁹ Atlas monographique des Peuples Autochtones Pygmées (n 16).

²⁰ *ibid.*

²¹ See African Commission on Human and Peoples’ Rights and International Work Group for Indigenous Affairs, Report of the African Commission’s Working Group of Experts on Indigenous Populations/Communities, 2005.

²² Jocelyne Shimin Sze and others, ‘Indigenous Peoples’ Lands Are Critical for Safeguarding Vertebrate Diversity across the Tropics’ (2024) 30 *Global Change Biology* e16981; David R Downes, ‘How Intellectual Property Could Be a Tool to Protect Traditional Knowledge’ (2000) 25 *Columbia Journal of Environmental Law* 247, 253.

²³ The structure of this discussion can be made available upon request.

Initial plans to conduct interviews directly within participants' communities had to be revised to account for contingencies on the ground. In fact, security issues rendered unrealistic a data-collection strategy involving numerous trips to specific locations in an area considered 'dangerous', and where local actors urged non-nationals of the DRC to exercise extreme caution. Furthermore, a few days before the fieldwork, the *Mwami*, the traditional leader of the Indigenous camps to be visited, passed away during a trip outside the province of South Kivu. According to local customs, no social activities could take place in their communities until the *Mwami* has been buried. Unsure whether the research would fall into this category, and given the financial constraints of the research project, the Indigenous leaders of 'RAPY' offered the use of their premises in the nearby village of Kavumu to hold the planned semi-structured individual interviews and focus group.

1.2 Community Discussions as Pre-Research Engagement: Making Legal Concepts Intelligible

Prior to individual interviews and the focus group, a community discussion lasting approximately 3.5 hours was organised with 43 Batwa participants (15 men and 28 women) from the villages of Cahoboka, Kamakombé, and Buyungule. The session combined the screening of an animated cartoon – *Navigating Traditional Knowledge and Intellectual Property: The Adventures of the Yakuanai*²⁴ – produced by the WIPO, depicting a fictional case of TK misappropriation, with a facilitated

discussion on three contemporary legal approaches to addressing biopiracy.

Each option was discussed in accessible, locally grounded terms, including both its potential advantages and limitations, as reported in the scientific literature. The Nagoya Protocol was described as a way to secure monetary and non-monetary benefits from IPLCs' TK, and as having practical implementation challenges, especially regarding traceability.²⁵ The 2024 WIPO Treaty was presented as introducing disclosure obligations to improve transparency and facilitate benefit-sharing,²⁶ although with limited sanctions for non-compliance. Patent protection was discussed as a means of obtaining exclusive proprietary rights over TK and related innovations. However, its significant constraints were highlighted as such: patents rely on a tool historically embedded in colonial legal contexts, need TK translation into the language of modern chemistry, offer limited protection duration, include financial and procedural barriers, and sometimes require *an identifiable* inventor (notably in the United States), which makes it difficult for Indigenous *groups* to be granted such protection.

The objective of the community discussions was not to transfer technical expertise to participants, but to establish a minimum level of shared understanding necessary for meaningful engagement with otherwise unfamiliar legal concepts. As participants had limited prior exposure to intellectual property frameworks (as confirmed during fieldwork), the study

²⁴ See <https://www.youtube.com/watch?v=-3bim1tFE6Tg> (last consulted on 30 April 2025).

²⁵ Pag-yendu M Yentcharé, 'Partager les fruits de l'innovation avec les communautés autochtones ou locales : les 12 travaux d'Hercule ?' (2016) 0(1) *Revue internationale de droit économique* 107, 138.

²⁶ Perron-Welch (n 12) 748.

does not claim to capture ‘unmediated’ legal preferences. Rather, it examines how legal protection mechanisms are understood when made intelligible through community discussions.

1.3 Data Collection

At the end of the community discussion, participants were invited to volunteer for subsequent stages of the research. Eighteen (18) semi-structured individual interviews, lasting approximately 50 minutes each, were subsequently conducted with participants from diverse social backgrounds, including women, elders, and younger participants. Recruitment was conducted onsite rather than through selection by local leaders to reduce bias and ensure that ordinary voices were heard alongside those of community elites. Individual interviews were conducted prior to the focus group to capture participants’ perspectives outside collective deliberative settings. This approach reflected the study’s interest in understanding how legal protection mechanisms resonate at the level of individual experiences and judgments, in a field where Indigenous Peoples are frequently approached primarily as collective entities rather than as actors with potentially diverse personal values and perspectives.

Interview questions focused on participants’ roles in the community and their general knowledge of traditional medicine (*without eliciting specific plant or animal data*), their prior understanding of patents, pre-existing forms of individual or collective ownership of TMK within their traditions, their views on the advantages and disadvantages of patents, their preferred legal protection among the three options presented, and perceived obstacles to patent use, including technical, financial, and epistemological barriers.

Finally, a focus group of nine (09) participants, purposively selected for variation in age, gender, and social status was organised to discuss themes emerging from the interviews. Considerable time was devoted to understanding how TMK is transmitted across generations. Discussions also covered pre-existing forms of ownership of TMK (whether individual or collective), experiences with external actors seeking access to it, preferred legal options to protect TMK, and perceived obstacles to the use of patents for protecting TMK. The session lasted approximately two (02) hours and was audio- and video-recorded. Interview data were coded using MAXQDA, while focus group discussions were hand-coded.

As a non-Indigenous researcher educated in both African and Western contexts, I approach this study with an awareness of the power dynamics involved in research on Indigenous communities. This positionality informed a research design that centres participants’ interpretations. I acknowledge that my background shapes how I interpret the data.

2. Findings

This section presents the main findings from 18 semi-structured interviews and a focus group with Batwa Indigenous Peoples in the Kabaré Territory, DRC. Ten women (n=10) and eight men (n=8) participated in these interviews. The youngest was 14, and the eldest was over 61.

About half the participants reported no formal schooling; 22 percent had secondary education; and six percent had either primary or technical training. 11 percent were illiterate, and 1 participant did not respond. Most were seasonal farmers with no land of their own – displaced from what is now the *Kahuzi Biéga Park* – while

others pursued other activities such as housekeeping, small-scale retail trade, and the coordination of development projects.

2.1 Experiences of Misappropriation of TMK by External Actors

The focus group discussion revealed prior experiences of TMK misappropriation by external actors, including national university students, foreign conservation NGOs and researchers. Both male and female Batwa participants expressed feeling ‘exploited’, explaining that external actors often sought their knowledge without later returning to share the results of the research conducted with them or any potential benefits arising from their contributions.

Interestingly, my motives were questioned, with some participants suspecting links to pharmaceutical interests. I clarified that no specific TMK was documented and recalled the rationale for my instructions not to refer to any plant, animal, or TMK processes during the interviews or focus group. I also mentioned my intention to return for additional fieldwork, though I fear I may have raised expectations that are difficult to meet, given the current (i.e., post-2025) security situation in eastern DRC.

2.2 Consistent Interest in Patent Protection for Traditional Medicinal Knowledge across Participants

Participants were asked during individual interviews which of the three legal options for protecting TMK (benefit-sharing, the WIPO *sui generis* mechanism, or patents) they would prefer if they had the power to decide. All 18 Batwas (100 percent) interviewed individually viewed patents

as both relevant and desirable tools for protecting their TMK, a position further echoed during focus group discussions. Only one participant (Interviewee 5) expressed support for the Nagoya Protocol approach, provided that benefits derived from the use of their TMK are shared equally (50/50). However, when asked to rank the available legal options, this participant ranked patents as the first choice. No interest was shown in the WIPO *sui generis* framework. Most interviewees expressed distrust toward the latter two mechanisms, particularly because they rely on the goodwill of TMK users to share benefits fairly with IPLCs. For example, Interviewee 10 stated bluntly, ‘*I don’t trust the [benefit-sharing] process*’, while Interviewee 17 added, ‘*They [bioprospectors] could lie to me*’. Interviewee 7 explained their preference for patents by saying, ‘*I prefer patent [over the two other mechanisms]. I don’t want someone else to exploit my TMK and give me only a percentage of their benefits*’. Similarly, Interviewee 18 emphasised the importance of control: ‘*With a patent, I will have control over the exploitation of my TMK. I’m not sure how I could control that if I have to wait for benefits to be shared*’. Interviewee 4 described benefit-sharing or *sui generis* mechanisms as ‘*a loss*’, further reinforcing the preference for patent protection. No alternative legal mechanisms were spontaneously suggested beyond the three options presented, which is consistent with the study’s focus on exploring preferences among existing contemporary legal tools.

2.3 Divergent Preferences on Ownership Models: Individual vs. Community Patents

Although all respondents supported patent protection, views diverged regarding ownership models. A majority (66.67 percent) favoured collective (‘community’)

patents, while a minority (38.88 percent)²⁷ preferred individual ownership, on the basis that patents should personally belong to those who hold the TMK.

Both groups (individual and community patents proponents) acknowledged the risk of intra-community conflict (e.g., Interviewee 4 and Interviewee 8). For instance, when I asked one of the eldest members advocating for such individual ownership:

‘How do you see future relationships (i.e., after you obtain a patent) with the other members of the community who may hold similar TMK as you? Don’t you fear a risk of conflict?’

They replied: *‘I understand that owning a patent [over a traditional process] can lead to jealousy within the community [...]. To avoid this, I would ask the [jealous] person to come and work for me’* (Interviewee 11).

And to my question as to *‘what would [they] do if that person does not want to work for you?’*,

They replied, *‘I can’t do anything about it’* (Interviewee 11).

Two others considered individual patents yet saw the other members of the community as *‘assistants’* (Interviewee 12 and Interviewee 13), whereas some saw their role as that of *‘collaborators’* (Interviewee 6 and 17). When I asked Interviewee 13, an Indigenous leader by birthright, whether other community members would agree to take on the role of assistants despite also holding knowledge about a medicinal process to cure a specific disease, they replied: *‘even in a*

“medical structure” [i.e., a hospital], there’s a leader. [...] Obviously, I would be that “leader” [i.e., the principal focal point of the community of such tool]’. As the discussion unfolded, Interviewee 13 asked whether they could transfer the patent to their son. I responded that this might be possible, provided legal requirements were met. When I subsequently asked whether they would consider transferring the patent to the broader community, given their earlier openness to a community patent *‘provided [they] are the leader’*, Interviewee 13 replied: *‘Yes, if my son is the leader’*. (Interviewee 13).

Some participants supported community patents to avoid conflict (e.g., Interviewees 3, 4, 5 and 12). But when asked to elaborate on the perceived advantages of such *‘community’* patents, some of them (Interviewees 3, 4, 10 and 17) framed the perceived benefits of such protection as *‘personal’*.

During the focus group discussion, one female elder inflexibly reaffirmed the support she had previously expressed during the interviews for individually held patents, articulating a position that could be summarised as: *‘my TMK, my patent’*. Her intervention prompted a discussion mostly dominated by two Indigenous males, who argued that communal patents better reflect customary practices. While the female elder’s position remained unchanged, a younger Batwa woman shifted from individual to community patents.

2.4 Patent Protection of TMK: Cultural Compatibility and Practical ‘Challenges’

During each interview, particular attention was given to explaining the main features of patents discussed in the literature, including their limited duration, as well as

²⁷ The cumulative weighting surpasses 100 percent owing to the response of Interviewee 17, who indicated receptiveness to both options.

the technical and financial requirements for obtaining protection. Participants were then invited to reflect on these potential obstacles from their own perspective.

None of them viewed patents as incompatible with their social practices or values. On the contrary, they welcomed the idea. In fact, Interviewee 5 noted, *'In our culture, there is nothing wrong with earning money [by exploiting our TMK]'*, while Interviewee 7 stated, *'Tradition can't be against something that is good for me'*. Interviewee 10 emphasised that *'our culture can't be a blockage. I don't see any problem in that. Currently, I give them [i.e., to other members of the community] some traditional medicines for free. If I explain to them that from now on, I will charge them, they will be happy for me, as they know this will help to me provide for my needs'*. Respondents also highlighted that TMK is often held individually without precluding collaboration. As Interviewee 4 explained, *'Sometimes there are discussions... You turn to certain people in the community to ask them about it and find out more'*.

All but Interviewee 2 considered the standard 20-year patent term sufficient to attempt commercialisation. Although this participant initially objected to their TMK entering the public domain after this period, they became more receptive when presented with the possibility of follow-up patents. This enthusiasm was shared by Interviewee 13, who stated: *'Before the 20-year period expires, I will have found a way [i.e., improved my TMK process] to obtain a new patent'*.

All interviewees welcomed the possibility of cooperating with scientists to 'translate' their TMK into the language of modern chemistry. Interviewee 2, however, emphasised that any shared information with these scientists should remain confidential. Interviewee 19 also stressed that such collaboration should include recognition that the *'TK originates*

from [their] community'. Furthermore, for many of them, financial constraints were identified as the main barrier to patenting (Interviewees 1, 4, 5, 6, 8, 10, 11, 19).

2.5 Patents as Tools for Economic Independence and Social Recognition

The Batwa participants were asked about their perceived advantages and disadvantages of patents. Beyond these financial constraints, they framed this intellectual property tool as a vector to live their most valued lives, what Amartya Sen calls 'capabilities'.²⁸ In fact, several interviewees mentioned that revenues from patent ownership could be usefully invested in fulfilling their basic economic, social and cultural rights. For instance, one interviewee mentioned that *'a patent would allow [us] to 'build schools and health centres'* (Interviewee 5). Others considered monetary benefits arising from the licensing of patent rights as a means to *'send [their] children to school'* (Interviewees 2, 8 and 13). Others also suggested that such money was important to *'buy essential goods'* (Interviewee 17), including *'salt'* (Interviewee 15). In fact, since the conversion of their land into the *Kahuzi Biéga National Park*, most of them claimed to have lost their means of living and to be living in conditions of severe poverty. Some participants went as far as to mention: *'We live as refugees on our land'* (Interviewees 1 and 4). Interviewee 1 also raised, during the individual semi-structured interviews, questions about his people's abilities to have the basic means to sustain life, *'if there is no industrial [architecture] to assist [them] in exploiting the potential of [their] TMK'*.

²⁸ Amartya Sen, *L'idée de justice* (Flammarion 2012) 15.

Moreover, the Batwas involved in the study, regardless of age, mentioned on several occasions that owning patents, individually or collectively, would allow them to gain social recognition. In the words of Interviewee 2, a young Batwa aged between 14 and 30 years old: *‘[A patent] will enable us to gain international recognition’*. The same wording was employed by Interviewee 3, a community leader aged between 46 and 60 years old: *‘A patent would enable me to be recognized anywhere’*. This interviewee also saw translation of their TMK into a chemical formula as a route for recognition: *‘Through these chemical names, information [about my TMK] will circulate everywhere. People will be able to search for it ... It will help promote my medicine and make it sought after. I will be sought after for it’*. [Emphasis added]. The most powerful quote on patents as a vehicle of social recognition I encountered was from Interviewee 6, who affirmed: *‘Patents command respect [...]’*. Such a search for recognition also revealed a dialogical dimension, as it relied on the gaze of the Other (whether Indigenous or non-Indigenous) as a necessary mediator. This was reflected in the words of the same Interviewee (6): *‘[A] patent would allow me to feel proud in front of other [Indigenous] members’*; and *‘[A] patent would increase my dignity because I feel neglected by non-Indigenous peoples’*.

Several Batwas also associated the search for social recognition potentially afforded by patents with a desire for economic autonomy, suggesting that these aspirations were understood as mutually reinforcing. For instance, Interviewee 5 stated that *‘A patent would enable me to be autonomous and independent [...] A patent would enable me to be recognized elsewhere’*, whereas Interviewee 10 explained that: *The money [received from patent exploitation] will boost my self-esteem’*.

These findings raise important questions, which I discuss below.

3. Discussion

3.1 Rethinking the Assumption of ‘Inadequacy’ of Patents for Indigenous Peoples

Dominant critiques of TK protection often rest on three assumptions: (1) TK does not satisfy the requirements of novelty, inventive step, and industrial applicability required under national patent laws;²⁹ (2) the use of formal intellectual property to protect TK constitutes a form of epistemic injustice or violence to IPLCs;³⁰ and (3) *sui generis* systems, alongside benefit-sharing mechanisms, therefore constitute more appropriate legal responses.

However, while the first assumption has been shown to be technically inaccurate,³¹ alternative approaches favoured in much of the literature (i.e., the third assumption) received little support among the Batwa participants in this study. In contrast, the prospect of ‘owning’ patents (the second assumption) and engaging in industrial processes involving their TMK (Interviewee 1) was viewed as attractive. More specifically, most, if not all, participants preferred exclusive proprietary rights over

²⁹ Nilce Ekandzi, ‘La protection des savoirs traditionnels médicaux par le droit de la propriété intellectuelle dans l’espace OAPI’ (PhD thesis, Université Paris 2 Panthéon-Assas 2017); Ebermann (n 5).

³⁰ Robinson, Raven and Lumsden (n 6) 460; Oguamanam (n 6) 45.

³¹ Pag-yendu M Yentcharé, *Brevets, ressources génétiques et savoirs traditionnels en droit international: la fabrique d’un droit de la reconnaissance* (Pedone 2025).

legal mechanisms centred on disclosure of TK origin or source and benefit-sharing.³² This empirical observation adds important nuance to critiques portraying patents primarily as colonial instruments. Although the fieldwork repeatedly emphasised the significant legal and practical obstacles associated with patenting, several participants nonetheless expressed a willingness to *'take a shot at the opportunity'*. The 20-year term of patent protection was considered sufficient to pursue commercialisation, and some indicated openness to renewing their innovations through follow-up patents.

Another recurrent assumption in the literature is that Indigenous knowledge is inherently communal in its construction and stewardship.³³ Although cases of individual property of TMK have been documented,³⁴ this idea of communal *property* has endured, suggesting that it underlies decision-making processes, ways of life, and personal opinions. The findings presented here suggest a more complex picture. In fact, the oscillation in respondents' preferences between individual and community patents indicates that the Batwas involved in this study do hold personal views and may lean toward individualist forms of

patent ownership, even though they live in communities.³⁵ This ambivalence may be linked to internal social dynamics, including power relations and gendered orders,³⁶ as well as to an internalised expectation of conforming to the figure of the 'good' Indigenous person who lives in community. Moreover, the hierarchical arrangements envisioned by proponents of individual patents *vis-à-vis* other members of the community (i.e., other IPLCs seen as their potential 'assistants') suggest a possible reconfiguration of traditional authority systems against the background of the expected enrichment brought about by patent protection of TMK, with some wishing to preserve their leadership and privileged position in the community (e.g., Interviewee 13, the traditional leader by birthright).

More broadly, these findings suggest forms of economic aspiration and engagement with innovation systems that resonate with Madhavi Sunder's argument that greater attention should be paid to enabling economically marginalised communities – 'poor people' as she refers to them –, including Indigenous peoples, to use intellectual property to protect and valorise their own knowledge.³⁷ As she observes, many Indigenous communities face material constraints, including limited productive infrastructure and familiarity with intellectual property systems, as well as restricted access to commercial knowledge related to marketing and branding.³⁸ From this perspective, the

³² Philippe Cullet, 'Property Rights over Biological Resources: India's Proposed Legislative Framework' (2001) 4(2) *The Journal of World Intellectual Property* 226.

³³ Daniel J Gervais, 'Traditional Knowledge and Intellectual Property: A TRIPS-Compatible Approach' 2005(1) *Michigan State Law Review* 137, 140; Mgbeoji (n 4) 164; Christine Haight Farley, 'Protecting Folklore of Indigenous Peoples: Is Intellectual Property the Answer' (1997) 30(1) *Connecticut Law Review* 1, 9.

³⁴ Claudia Finetti, 'Traditional Knowledge and the Patent System: Two Worlds Apart?' (2011) 33 *World Patent Information* 58.

³⁵ See Findings' section 3.2 above.

³⁶ *ibid.*

³⁷ Madhavi Sunder, 'The Invention of Traditional Knowledge' (2007) 70 *Law and Contemporary Problems* 112.

³⁸ *ibid.*

frequently repeated claim that patents are inherently *inadequate* for protecting TK, beyond the mistaken assumption that this knowledge fails to meet patentability criteria, risks becoming overly totalising. The main challenge may instead lie in the lack of entrepreneurial capacities needed ‘to repackage traditional knowledge into products useful for consumers in mass markets’³⁹ and to develop ‘the capacity to produce and deliver these products in sufficient quantity and quality as to satisfy such markets’,⁴⁰ where such strategies align with community aspirations and priorities. As Sunder notes, ‘this capacity for innovation, work, and cultural sharing is part of what makes us human’,⁴¹ and some of the Batwa quotations discussed above echo this aspiration. At the very least, this research provides an example suggesting that claims according to which Indigenous Peoples reject patents or view them as inadequate tools for protecting T(M)K⁴² should not be generalised to all Indigenous communities.⁴³ While such claims may accurately describe the position of some groups, the findings presented here point to more diverse and context-dependent perspectives.

³⁹ J Michael Finger, ‘Introduction and Overview’ in J Michael Finger and Philip Schuler (eds), *Poor People’s Knowledge: Promoting Intellectual Property in Developing Countries* (World Bank Publications 2004) 35.

⁴⁰ *ibid.*

⁴¹ Sunder (n 37) 112.

⁴² Albane Geslin, ‘La protection internationale des peuples autochtones: de la reconnaissance d’une identité transnationale autochtone à l’interculturalité normative’ (2011) 56 *Annuaire français de droit international* 658.

⁴³ Jessica Christine Lai, *Indigenous Cultural Heritage and Intellectual Property Rights: Learning from the New Zealand Experience?* (Springer International 2014) 5.

It is also worth noting that, while the existence of individual forms of property within Indigenous communities is not new,⁴⁴ it has not always been fully integrated into subsequent scholarship. In the specific case of the Batwas involved in this study, one may hypothesise that prolonged exposure to poverty, displacement and insecurity in a conflict-affected region may have contributed to shaping aspirations and priorities, other than ‘*living in harmony with nature*’.

Such aspirations are not immune to critique. From a moral standpoint, some may argue that patents are embedded in capitalist systems associated with environmental degradation and extractivism, at a time when some scholars advocate forms of de-growth partly inspired by Indigenous ways of life. From an epistemological perspective, others would contend that patenting TK entails operating within an ethnocentric Western legal framework that may provide short-term benefits while ultimately undermining Indigenous interests.

However, such critiques may project external expectations onto Indigenous communities and, at times, substitute normative certainty for sustained empirical engagement. While often well-intentioned, they risk overlooking the diversity of lived experiences and evolving aspirations in contexts marked by structural constraints. Against the background of this study, once exposed to balanced information regarding available legal options and given the opportunity to deliberate, the Batwas participants opted for the less favoured tool in expert-driven debates: patents.

⁴⁴ Darrell A Posey, ‘Intellectual Property Rights and Just Compensation for Indigenous Knowledge’ (1990) 6(4) *Anthropology Today* 15; Graham Dutfield, ‘The Public and Private Domains: Intellectual Property Rights in Traditional Knowledge’ (2000) 21(3) *Science Communication* 281.

3.2 Beyond the Narrative of Patents as ‘Cold Tools of Capitalism’

The findings, albeit limited to the group of Batwa Indigenous peoples involved in the study, invite a more nuanced engagement with readings of patents as purely instrumental tools of capitalist accumulation. Beyond all the well-established criticisms of the *Trade-Related Aspects of Intellectual Property Rights Agreement*,⁴⁵ scholarship in the sociology of patenting suggests that this tool is also about recognition; a value central to protecting TK associated with genetic resources. As Theresa Veer and Florian Jell demonstrated, ‘patenting is often about what is socially acceptable or desirable’.⁴⁶ Dan Burk also argues that patent acquisition has a ceremonial dimension and reflects mainstream narratives of innovation and success.⁴⁷

For the Batwas involved in the study, the expulsion from the *Kahuzi-Biéga National Park* for conservation purposes, their precarity and the desire for recognition may explain their interest in patents, as this tool conveys a high social status (namely, that of an innovative actor)⁴⁸

endowed with significant economic power). As Interviewee 6 puts it: ‘A *patent* [...] can be used as proof that [I am] the holder of traditional knowledge’.

This complicates the *simple* narrative of patents as cold tools of business or mechanisms by which actors of the capitalist economy compete and control.⁴⁹ Even though scholars have rightfully observed that they act as mechanisms of exclusive ownership, this research suggests that they may operate as symbolic markers of social identity. They are credentials. This may explain their accounts of prior experiences of *not being named*⁵⁰ as part of a broader engagement with external actors, and their suspicions about my motives for conducting this research. Desiring to obtain such credentials may not mean that the Batwas are betraying moral values (e.g., degrowth, or access to medicines and open science impeded by patent rights), praised amid unsustainable modes of production and consumption. Rather, they may be demonstrating an adaptive engagement with contemporary realities while preserving meaningful aspects of their social world.⁵¹ As part of this process of adaptation, their accounts may suggest an implicit understanding that beyond incentivising innovation, intellectual property tools and laws also foster the good life: they ‘[...] affect our ability to think, learn, share, sing, dance, tell stories, joke, borrow ideas, inspire and be inspired,

⁴⁵ Adekola and Majekolagbe (n 7) 382; Ebermann (n 5); Finetti (n 34) 58; Gold (n 7) 185.

⁴⁶ Florian Jell and Theresa Veer, ‘Contributing to Markets for Technology? A Comparison of Patent Filing Motives of Individual Inventors, Small Companies and Universities’ (2012) 32(9) *Technovation* 513.

⁴⁷ Dan L Burk, ‘On the Sociology of Patenting’ (2016) 101(2) *Minnesota Law Review* 421, 442.

⁴⁸ Sarah E Jack and Jason Rantanen, ‘Patents as Credentials’ (2019) 76 *Washington and Lee Law Review* 311.

⁴⁹ *ibid.*

⁵⁰ Florence Piron, ‘Penser le plagiat pour mettre en lumière le cadre normatif du régime contemporain des savoirs scientifiques’ (2015) 1 *Questions de Communication* 217, 231.

⁵¹ Yentcharé (n 31).

reply, critique, and pay homage'.⁵² Put differently, the Batwas' associations between patents, social recognition, and economic autonomy suggest that intellectual property may be understood by them less as a colonial construct than as a potential resource for human dignity. For them, patents operate as technologies of recognition.⁵³

3.3 From Social Desirability to Institutional Efficiency

What happens when patents appear socially desirable to IPLCs but remain institutionally difficult to mobilise in practice? This question deserves careful consideration, especially since the structural constraints associated with patents have significantly shaped scholarly scepticism regarding the suitability of these tools for protecting Indigenous Knowledge. One of the rare documented examples of an Indigenous-led attempt to commercialise TMK through patent systems, the Mudjala TK Project in the Kimberley Region of Western Australia, provides a useful illustration of these limitations in practice. In this case, the Nyikina Mangala peoples sought to protect and commercialise knowledge associated with the medicinal properties of the 'nyardoo majala' tree, whose bark presents analgesic properties.⁵⁴ Beginning

in the late 1980s, the initiative involved a long-term partnership between Griffith University and the Jarlmadangah Burru Aboriginal Corporation.⁵⁵ More than sixteen years of research and development were required before a patent application was eventually filed in 2003.⁵⁶ The project also depended on substantial institutional support. Significant public funding was mobilised to sustain research activities, community training, and future commercialisation strategies.⁵⁷ A company was later incorporated to manage the intellectual property assets, and several patents linked to this TMK were eventually granted in Australia, Japan, India, New Zealand, and the United States through the Patent Cooperation Treaty system. Yet despite these achievements, the commercialisation process remained fragile and uncertain, notably following the short-lived licensing agreement concluded with a biotechnological company in 2008.⁵⁸

As scholars discussing this case have observed, patents may support Indigenous self-determination by enabling communities to retain greater control over commercialisation processes and pursue culturally grounded forms of economic development.⁵⁹ However, the Mudjala TK Project also demonstrates the extent to which such strategies require access to long-term funding, scientific partnerships, legal expertise, and institutional stability.⁶⁰ Patent protection therefore

⁵² Madhavi Sunder, *From Goods to a Good Life: Intellectual Property and Global Justice* (Yale University Press 2012) 1–2.

⁵³ See generally Axel Honneth, *The Struggle for Recognition: The Moral Grammar of Social Conflicts* (MIT Press 1996).

⁵⁴ Virginia Marshall and others, 'Community Economic Development in Patenting Traditional Knowledge: A Case Study of the Mudjala TK Project in the Kimberley Region of Western Australia' (2013) 8(6) *Indigenous Law Bulletin* 17.

⁵⁵ *ibid.*

⁵⁶ *ibid* 18.

⁵⁷ *ibid* 21.

⁵⁸ *ibid.*

⁵⁹ *ibid* 17.

⁶⁰ *ibid* 18.

remains deeply conditioned by structural inequalities linked to capital, technical expertise, and innovation systems concentrated in dominant economies, which explain scholarly concerns that these tools operate as forms of epistemic violence toward IPLCs.

Against this background, the Batwas' strong interest in patents should be approached cautiously. If the long timelines associated with research, development, and commercialisation also apply in their case, patent-based strategies would not address the immediate economic needs repeatedly expressed during fieldwork, including the desire to *'buy essential goods'* (Interviewee 17) such as *'salt'* (Interviewee 15), or broader collective aspirations such as building *'[...] schools and health centres'* (Interviewee 5). The challenges illustrated by the Mudjala TK Project would likely affect them as well. The process of bringing TMK-based innovations to market could prove even more frustrating for the Batwas than it was for the Nyikina Mangala peoples, who benefited from extensive institutional and financial support, given that the DRC continues to face significant security challenges and lacks, comparatively to Australia, such public resources.

At the same time, these constraints do not necessarily invalidate the economic and social meanings that patents may hold for the Batwas involved in this study. Their interest in patent-based strategies should therefore be treated as significant rather than incidental. At the very least, supporting IPLCs who wish to commercialise their TMK through such tools may be one way of respecting their right to participate in scientific life, as recognised in Article 27(1) of the Universal Declaration of Human Rights,⁶¹

⁶¹ Universal Declaration of Human Rights (adopted 10 December 1948).

as well as their right to maintain, control, protect, and develop their intellectual property over traditional knowledge, as affirmed in Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples.⁶² Even where commercialisation outcomes remain uncertain, participation in processes aimed at securing patents over TMK-based innovations may itself constitute a form of recognition (provided that such recognition does not operate merely as what Honneth describes as an *'ideology'*, that is, a situation in which institutional realities fail to live up to the promises conveyed to those expected to place their trust in them).⁶³ Such processes would require IPLCs to be considered fully as actors capable of innovation, collaboration, and participation in scientific and economic life (Interviewees 2, 3, 5, 6 and 10).⁶⁴ This calls for reflection on the conditions under which patents may become meaningful or beneficial for IPLCs themselves.

3.4 Toward a More Nuanced Debate on Patents and TMK

The findings of this study call, at a minimum, for an added degree of nuance in how legal discourse conveys *'truths'* and *'certainties'* about what is good or not for Indigenous Peoples. They suggest that debates surrounding the protection of TMK should not be shaped only by considerations of moral appropriateness or

⁶² United Nations Declaration on the Rights of Indigenous Peoples (adopted 13 September 2007).

⁶³ See Olivier Voirol, *'Préface'* in Axel Honneth, *La lutte pour la reconnaissance* (Gallimard 2013) 29.

⁶⁴ Pag-yendu M Yentcharé and Diibe Bakolimba, *'Le contrat de bioprospection comme relation: au-delà de la logique transactionnelle'* (2024) 38(4) *Revue internationale de droit économique* 31, 42.

institutional efficiency. Rather, they raise questions regarding whose perspectives are treated as authoritative in determining appropriate legal futures for IPLCs.

Much of the literature on the protection of TK has been shaped by expert-driven critiques that stress colonialism, commodification, extractivism, and epistemic violence, while alternative perspectives have often remained marginal within the field. These critiques remain important. However, when they become detached from empirical engagement with IPLCs' own perspectives, such critiques may risk reproducing the very colonial dynamics they seek to challenge. One eloquent example of this may be the recurring depiction in scientific literature that Indigenous Peoples 'live in harmony with nature'. Although such representations stem from well-meaning attempts to articulate alternatives to unsustainable modes of production and consumption, they also risk reactivating older imaginaries, associated with Lévy-Bruhl's thought,⁶⁵ that portrayed Indigenous Peoples as fundamentally different from 'modern' societies and less oriented toward economic aspiration, innovation, or participation in market life.

Against this background, this research does not support a naïve celebration of patents, nor does it suggest that participation in market-oriented innovation systems is inherently oppressive or incompatible with the Batwas' aspirations. It brings into focus a different and often overlooked question: who has the legitimacy to define what constitutes an appropriate legal future for IPLCs? In that regard, Darrell Posey, a pioneer of the field at the nexus

of biodiversity and intellectual property rights, offered a reflection that deserves renewed attention: 'Each [Indigenous] group must have the option to enter into market economies or not - and to what extent and under which circumstances they want to do so, if at all'.⁶⁶ [Emphasis added].

4. Limits of the study

This study reflects the empirical and methodological context in which it was designed and implemented, enabling participants to engage with and articulate their perspectives. As such, its findings do not aim at statistical generalisation, whether globally or within the DRC. Rather, in a specific deliberative context, they capture the largely undocumented views of IPLCs, in this case, Batwa Indigenous Peoples who generously shared their perspectives on the role patents could play in protecting their TMK, despite acute security constraints.

The study adopted an exploratory design. While a full community-based participatory research-action approach (entailing involvement at all stages of the research process) was not feasible within the available resources, particular care was taken to ensure respectful and context-sensitive engagement. This approach aligns with recent scholarship that conceptualises TK sourcing contracts as relational rather than transactional.⁶⁷

Furthermore, the abstract nature of patents required a process of translation. Some interviewees initially associated the notion of 'brevet' (patent, in French)

⁶⁵ Lucien Lévy-Bruhl, *La mentalité primitive* (Les Presses universitaires de France 1922).

⁶⁶ Posey (n 44) 15.

⁶⁷ Yentcharé and Bakolimda (n 64) 42.

with forms of authorisation to practice medicine or to commercialise products. Through iterative discussion and culturally grounded analogies facilitated by trusted bilingual translators, participants developed, as reflected in the data, a shared understanding of patents as conferring control and exclusivity over knowledge. While the translation process aimed to clarify participants' responses (rather than steer them), there is a residual risk that it may have shaped their interpretations. Accordingly, the research focuses on how legal concepts are understood *once* made accessible, rather than collecting participants' pre-existing 'unmediated' views.

Finally, the study was originally designed as a comparative inquiry, including a second field site in a protected area of the DRC. Access initially granted was ultimately denied due to bureaucratic and political constraints. As the individual who prevented access to this second fieldwork stated: *'The IPs [Indigenous Peoples] are not interested in research. It is we who interest them in scientific work. You must go through us, and if we give you permission, we will choose the people you can talk to and appoint people to accompany you and help you with translation'*. [emphasis added]. This statement echoes informal accounts from local actors who describe these dynamics as paternalistic and depict this individual and their organisation as gatekeepers who constrain Indigenous autonomy. These dynamics, including reported institutional tensions with FHI 360 (of which I may only have been collateral damage), have affected fieldwork by limiting the scope and richness of the data, and merit further investigation in the context of biodiversity governance and the politics of knowledge production. In fact, they also echo broader questions raised throughout this study regarding legitimacy and epistemic authority in relation to IPLCs and their TK.

CONCLUSION

This article has sought to foreground the perspectives of Batwa Indigenous Peoples in the Democratic Republic of Congo regarding the role patents may play in protecting their traditional medicinal knowledge (TMK). In doing so, it complicates long-standing assumptions in transnational environmental law and intellectual property scholarship, particularly the idea that patents are 'inadequate' tools for protecting Indigenous knowledge, or that IPLCs do not want patents.⁶⁸

The findings do not invalidate the substantial body of scholarship documenting the practical, moral, and epistemological limitations of patent systems. Rather, they suggest that debates regarding the adequacy or inadequacy of such legal tools cannot rely exclusively on expert-driven assumptions detached from sustained empirical engagement with the communities concerned. In this study, the Batwas involved expressed consistent interest in patents as potential tools for economic autonomy and recognition after being presented with balanced information regarding existing legal options and given the opportunity to engage with these concepts in accessible terms. As such, the findings caution against overly homogeneous or romanticised portrayals of Indigenous relationships to law, property, and innovation.

⁶⁸ See more specifically, the following Declaration 'To No Patenting of Life! Indigenous Peoples' Statement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the WTO Agreement' (United Nations, Geneva, 25 July 1999).

This research does not argue against the relevance of designing protective frameworks *from above* – whether through the Nagoya Protocol or *sui generis* mechanisms such as current efforts at the WIPO. Rather, it raises questions regarding the extent to which such frameworks remain attentive and adaptable to the perspectives of the communities they seek to protect. In fact, if the principle of free, prior and informed consent is to be taken seriously, it must include IPLCs' freedom to accept or reject experts' opinions about which legal tool is relevant for them. Put differently, this means that IPLCs can (and should) be co-designers of their legal futures (even when they make a 'wrong' choice; but should this not ultimately be their mistake to make?). As Antonio Gramsci famously argued, all individuals participate in the production and interpretation of social worldviews, even if they are not institutionally recognised as 'intellectuals'.⁶⁹ IPLCs' capacity to engage with complex legal frameworks should therefore not be dismissed on the basis of their non-expert status.

These findings do not ignore the structural barriers that shape IPLCs' access to patent systems, including the costs of patenting, limited legal expertise, and enforcement challenges, particularly in transnational contexts. However, they point toward a broader issue concerning epistemic authority in legal discourse on TK. The article argues that IPLCs are the most legitimate to articulate their own visions for the future of their knowledge systems, including when their preferences diverge from dominant expert assumptions. However, for patents

to genuinely benefit Indigenous Peoples and Local Communities, much more serious engagement with their structural constraints remains necessary.

This research matters because it opens an underexplored avenue to support community-driven intellectual property strategies through equitable and ethical partnerships among IPLCs, scientists, and legal aid providers. However, recognising the potential relevance of patent-based strategies for some IPLCs should not come at the expense of institutional alternatives that may be more appropriate for other communities who *do not wish* to patent their TMK.

This study also opens avenues for future research. Comparative studies across regions could assess whether similar openness to patent protection exists elsewhere or, conversely, provide empirical insight into why specific IPLCs reject this form of intellectual property, moving beyond assumptions. Further empirical research with other Indigenous groups relying on TMK, such as the Baka and Bagyéli communities in Cameroon, with whom initial engagements have begun, would be particularly valuable in testing the extent to which these findings hold across contexts. Expanding both the number and diversity of participants would also enable a more robust assessment of intra-community variation and broader patterns of engagement with patent systems. More broadly, future research could examine intra-community dynamics (such as gender and power relations) and their effects on preferences for different legal options to protect TMK, as well as the role of underlying conceptions of property. It could also explore how assumptions about IPLCs' (in)competence on patent technicalities have shaped both scholarly narratives and governance practices. Finally, further research could (1) explore the hypothesis of '*paternalism*'

⁶⁹ Antonio Gramsci, 'IV. Les intellectuels' in Razmig Keucheyan (ed), *Guerre de mouvement et guerre de position* (La Fabrique Éditions 2012) 134.

(see ‘limits of the study’ above) in light of the fact that some actors sustain a romantic image of Indigenous peoples as ones ‘*living in harmony with nature*’, and (2) investigate how such imaginaries may have shaped, at least in part, the narrative of the ‘inadequacy’ of patents to protect TMK. These lines of investigation point to a more fertile field of study than the apparent *aporia* suggested by the limited effectiveness of the current solutions to biopiracy.⁷⁰

Acknowledgements*

⁷⁰ Yentcharé (n 25) 114; Marie-Denise Vane, ‘Questioning the Potential of the Forthcoming WIPO’s Diplomatic Conference on Intellectual Property and Genetic Resources: Endless Negotiations Coming to a Successful End?’ (2023) 9 LSE Law Review 48, 65.

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