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Book Review

GLOBAL BIOPIRACY: PATENTS, PLANTS, AND INDIGENOUS KNOWLEDGE, by Ikechi Mgbeoji[1]

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IKECHI MGBEOJI'S CONTRIBUTION to the existing literature on biopiracy and the appropriation of traditional knowledge of the uses of plants represents a valuable and provocative perspective. His book, *Global Biopiracy: Patents, Plants, and Indigenous Knowledge*, protests against the seizure of Indigenous biocultural assets that are delegitimized equally (and simultaneously) by scientific and legal paradigms. For his purposes, Mgbeoji defines traditional knowledge of the uses of plants as "that body of evolving knowledge, including the innovations of individuals and communities, that operates *outside the dominant Eurocentric paradigm* and that is concerned with the use of plants for social, environmental, medicinal, and therapeutic purposes."[3] The preservation of such environmental knowledge, as well as medicinal, folkloric, and other biologically-based insights, is communal and cultural in many instances. Its unauthorized "taking" may be a form of cultural appropriation facilitated by the complicity of dominant (inter)national regimes for intellectual property (IP) protection. *Global Biopiracy* provides an interdisciplinary critique, which interrogates the political, economic, and legal forces that have together shaped the progressive proliferation of global biopiracy.

Mgbeoji's text is almost entirely infused with a perspective premised on power disparities and exploitation. There is a sense of urgency in the tone of his argument that transcends legal scholarship into the bordering region of social

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1. (Vancouver: UBC Press, 2006) 311 pages [*Global Biopiracy*].
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3. *Supra* note 1 at 11 [emphasis added].

political advocacy—indeed, *Global Biopiracy* may be characterized as deliberately polemic.[4] As a "scholarly" critique, conservative readers may find Mgbeoji's writing dramatic, but this can be attributed to conditioned cultural preferences over how "knowledge" should read in the context of "traditional legal writing." In his analysis as well as through his narrative writing style, Mgbeoji demonstrates that neither the scientific tradition nor legal discourses are mundane by necessity. Mgbeoji's style may make his book more accessible to a broader audience despite the significant degree of technical legal content covered; the book's form reflects a blended position in content that strives to bridge the North-South divide, while highlighting the potential for civil society to allay continued injustices..

Global Biopiracy demonstrates how imperative claims to "civilization"—with their focus on economic development as a priority and the prescribed unilateral means for its attainment[5]—cloak the exploitation of land, resources, and peoples with whom they come into contact. Commenting on a host of major global issues, with particular attention to the protection of individual and collective rights of Indigenous peoples, *Global Biopiracy*'s focus on exploitation provides a distinctly African, albeit romantically singular, perspective otherwise lacking in the literature. Still, Dr. Mgbeoji's exhaustive bibliography and scholarly mastery of the numerous and varied legal instruments in his text are

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4. For example, he writes:

> [L]and, gold, and silver did not form the only motives for colonialism: exotic plants were also a factor. ...Save in exceptional circumstances, the history of plant transfer is no match for the high drama associated with the state-sponsored looting and pillaging of gold and silver by European explorers, pirates, and *conquistadors*. Simply put, plant theft seems benign, if not mundane. ...Yet plants have always formed the substratum upon which diverse human civilizations have prospered. ...[T]he developmental trajectory of the United States, its sustained use of enslaved non-white labour, and the consequential contribution of that disreputable practice to the discourse and law on human rights and dignity would probably not have occurred if there had been no sugar cane or cotton farms.

Ibid. at 95-96. His characterizations are animated: "[T]he modern process of appropriation of plants and TKUP [traditional knowledge of the uses of plants] is sophisticated and subtle, quite different from the blatant physical bravado of colonial pirates." *Ibid.* at 13.

5. *Ibid.* at 57:

> Development has thus largely been conceived of and pursued as a lineal process, with the West at the vanguard and the cultural 'backward peoples' of the South at the rear ... [reflecting] a debatable continuum of linear movement by non-Western peoples and their societies towards Western values and worldview ... in order to assimilate [them] ... into the 'mainstream.'

only secondary to the dominant manifestations of Mgbeoji the lawyer. As advocate, he warns of the dangers of biopiracy for the survival of biological and cultural diversity. The implication of the appropriative features of Western "science" for plant life forms, Mgbeoji writes, "is that the monocultural approach to human dietary preferences, agricultural practices, epistemology, and philosophy that is now in vogue constitutes a formidable threat to the sustenance of the diversity of crops."[6]

One important purpose *Global Biopiracy* serves is to identify how the current framework for situating the debate on the appropriation of traditional knowledge "marginalizes and underappreciates the role of women and farmers in the development of plant genetic diversity."[7] Mgbeoji contends that "[t]his is not a coincidence as, since its emergence during the Renaissance, Western science has been masculinist and racist."[8] The process of sanctioning the appropriation of Indigenous peoples' knowledge, argues Mgbeoji, is "not merely a legal problem; rather, it is a phenomenon that operates within a social structure of inbuilt primordial prejudices and biases against non-Western cultures and non-Western epistemological frameworks."[9] The reader of Mgbeoji's book progressively becomes aware of how Indigenous contributions to knowledge, plant varieties, and genetic resources are systemically viewed as "inferior" and sometimes not regarded at all by Western (bio)colonialists. This will not bode well, he argues, for our collective future.

After the introductory chapter outlines the main issues, chapter two explains basic concepts and, in challenging dominant understandings, offers working conceptual definitions foundational to Mgbeoji's ensuing analyses. From historical origins to theoretical underpinnings, this chapter works through the development of the patent regime and its transplantation into foreign and international contexts, while emphasizing that the modern patent system is ill equipped to protect Indigenous peoples' knowledge. Chapter three examines "the global regime on plants" and the inferences that can be made regarding how plant life forms are treated (as commodities) and valued (in

6. *Ibid.* at 58.

7. *Ibid.* at 1.

8. *Ibid.*

9. *Ibid.* at 3.

market terms of trade). Here, the author ties the idea of biological diversity to cultural diversity and provides a comparative review of Indigenous cosmologies with dominant religions. The conception of what is legitimate science within the dominant discourse is culturally situated to advantage the in-group. Foreign laws and regulatory frameworks belonging to a Western-made patent regime perpetuate hegemonic assertions of what constitutes knowledge in terms of its culturally constructed empirical vestiges. Accordingly, Mgbeoji argues that traditional knowledge is devalued institutionally and instrumentally through the dual processes of de-classifying it as science and re-characterizing it as untested raw inputs in the production line of so-called patentable "inventions."[10] While this stance is familiar in the biopiracy literature, the difference here is that the author's review of cosmologies helps foster an understanding in his reader of the non-market value of plants that informs the labour invested by Indigenous communities in biodiversity conservation and ecological evolution.

Relationships between humans and plants are varied.[11] The disparate endowment of plant germplasms to the "South" has fostered a politics of control by the "North" that treats plants as resource "object[s] for human domination"[12] and alienates the physical and intellectual labour of "local and traditional farmers and breeders, over the millennia, to conserve and improve plants."[13] Upon review of the international instruments that reaffirm sovereignty over plant genetic resources, in particular the Convention on Biological Diversity, Mgbeoji concludes that the Common Heritage of Mankind (CHM) categorization for plants is misguided, exclusionary, and inapplicable to plant germplasms. His fourth chapter builds on this view by explaining the appropriative features of the CHM concept and tracing its

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10. *Ibid.* at 58:

> In consequence, non-Western scientific contributions to plant improvement have regrettably been perceived as 'folk knowledge' unworthy of recognition. Plant life forms, which have witnessed thousands of years of cumulative intellectual interventions and improvements, especially in the hands of women farmers, are denigrated as raw germplasm and wild species unless and until 'improved' in Western laboratories by 'real scientists.'

11. *Ibid.* at 52-60.

12. *Ibid.* at 58.

13. *Ibid.* at 4.

historical evolution. Mgbeoji argues that the "North" has expanded its appropriative interests in plant germplasms and traditional knowledge with stealth through the International Agricultural Research Centres and the Food and Agricultural Organization. Chapter five examines the impact of patent regimes on biopiracy in greater detail and critiques the juridical regime of key Northern countries. Here, Mgbeoji documents how patent law has been judicially misinterpreted and how patent doctrine has been administratively misapplied to expand the number of patents, the fields to which they apply, and the appropriative functions they enable. At the behest of strong corporate lobbies in countries of the North, these norms have become the governing universal minimum requirements for patentability that apply to all World Trade Organization member states pursuant to the Trade Related Aspects of Intellectual Property Agreement (TRIPS).[14] Mgbeoji proceeds to offer a number of different solutions to biopiracy which are essentially committed to a property basis for establishing entitlement and control over plant germplasms. The final chapter concludes by looking at some remaining key issues intersecting with biopiracy, including biodiversity degradation, global food insecurity, the preservation of environmental integrity, and the capacity to protect public health, human rights, and development agendas. With optimism, Mgbeoji outlines solutions for moving forward as he takes us on a journey into the geographic regions of the world unvisited by many Western readers and expands our knowledge of other world-perspectives under renewed threat of colonialist agendas.

Mgbeoji covers a lot of territory, leaving the reader occasionally exhausted by the sheer scope of his project, particularly if it is one's first foray into the subject matter. While *Global Biopiracy* is an ambitious work, it readily serves as an encyclopedia of relevant sources for the reader who is eager to become current in this debate. Certain inferences and conclusions, however, merit further consideration.

First, Mgbeoji casts part of the problem of global biopiracy in broader terms as an issue of cultural domination, colonial subordination, and systemic

14. *Agreement on Trade-Related Aspects of Intellectual Property Rights*, Annex 1 C of the *Marrakesh Agreement Establishing the World Trade Organization*, 15 April 1994, online: <http://www.wto.org/english/docs_e/docs_e.htm>.

discrimination against both the means of knowledge production and the actual form of traditional knowledge that is produced by various Indigenous communities. Second, Mgbeoji considers plant germplasms and the traditional knowledge of their uses to comment on how the emerging principle of the CHM is inconsistent with the numerous international instruments that recognize territorial sovereignty over plant germplasms. The CHM, he contends, endangers rather than protects the interests of gene-rich countries from predation by the gene-poor North. Third, the solutions that Mgbeoji offers against the harms of biopiracy are, ironically, global in their scope and implicitly reinforce the hegemony of existing proprietary regimes by surrendering alternative and culturally diverse means for managing traditional knowledge and plant germplasms to an existing property paradigm.

Global regimes for patent protection effectively alienate (bio)knowledge that does not conform with the North's legal prescriptions of accredited "science," and simultaneously differentiate other forms as being without authority. To demonstrate the flaws in this practice, Mgbeoji provides numerous examples of the accepted therapeutic applications of so-called "ethnic" traditional knowledge to suggest that traditional knowledge from the field may in fact be better than knowledge gained in the lab. Traditional knowledge offers a holistic approach for achieving positive health outcomes, and field knowledge may prove more "scientifically" tested and reliable, given that results are validated over time and are inherently adaptive to changing environmental conditions. This is a point well emphasized by Mgbeoji, along with his assertion that traditional knowledge promotes greater plant biodiversity through selective adaptive breeding.

The "ethnography" of knowledge is, in turn, normatively subsumed within administrative and legal systems through the professional judgment of patent examiners and judges as to what constitutes a patentable "invention" within domestic law and, conversely, things that are "characterized as being suitable only as objects of anthropological curiosity."[15] Mgbeoji contends that if traditional knowledge were also to be treated as a property right of its community of holders, then it could legally be protected from piracy, much like the codified knowledge contained and disclosed within patent and other IP

15. *Supra* note 1 at xi.

instruments.[16] The fact that traditional knowledge is outside existing patent regimes leads to Mgbeoji's call for action against biopiracy. Mgbeoji is thorough in providing examples of biopiracy that demonstrate not only the appropriative functions of domestic patent regimes of industrialized countries, but also the related phenomenon "in which legal principles and cultural biases against non-Western forms of epistemology conspire to enable the appropriation of traditional biocultural resources."[17]

A number of factors operate in concert to enable the appropriation of biocultural knowledge. One is the imperialist manner in which patent systems, founded on individualist philosophies, distort creativity as an atomistic process rather than as a continuum tied to tradition and community. Another is the manner in which such a regime has been exported from the old empire to the colonies and the New World by imposition.[18] Biopiracy has also been facilitated by culturally contingent and progressively relaxed doctrinal requirements related to novelty and adequacy of disclosure; the blurring of traditionally significant distinctions between discoveries and products of nature; and insufficiently strict requirements for the documenting of prior art. Patent law's preferences for what is admissible prior art also ignore the differences in literacy rates between industrialized and developing countries and the corresponding variance in oral cultures.[19] Since a patent in one jurisdiction can, under international law, establish priority rights for patenting in other jurisdictions, a transnational system of predation is created and maintained through the rhetoric of development agendas that are dubiously employed to justify patent proliferation trends. After outlining the history of the patent system (and its underlying philosophies), Mgbeoji concludes that direct voluntary adoption of

16. *Ibid.* at 12.

17. *Ibid.* at 14 (Mgbeoji describes how a sample of Nigerian insect-resistant cowpea developed by local farmers was taken by a scientist from the University of Durban and examined "scientifically" for its chemical properties, which were then the subject of a patent for "invention," and how chickpeas cultivated by subsistence farmers in India and Iran formed the basis of an attempt by two Australian government agricultural agencies to patent this knowledge, even though it only became known once the germplasm was stored in an international gene bank).

18. *Ibid.* at 18.

19. *Ibid.* at 29.

this legal system has been more the exception than the rule. Mostly, the spread of patent regimes has either been through political pressure for their adoption or, more coercively, through "the migration of Europeans and their consequent colonization of a host of American, African, Australian, and Asian indigenous peoples."[20] On this view, Mgbeoji concludes that "[t]he concept of biopiracy concerns law, ethics, morality, and fairness,"[21] and argues for the use of contract law to ensure the equitable sharing of benefits, to create a return of gains to the original community, and to encourage various licensing advantages.[22] Mgbeoji's analysis of the systemic devaluation of communally-tested traditional knowledge and its colonial misappropriation will find a sympathetic audience.

Indigenous societies have long been stewards of valuable traditional knowledge and plant germplasms, but they may not have always thought of their roles and functions in terms of ubiquitous, modern-day conceptions of "property," or in terms of vocabularies of exclusion which enable biopiracy while excluding Indigenous contributions.

Mgbeoji's solutions to global biopiracy include the formulation of a community patent system, the registration of traditional knowledge in some form of globally searchable database, and *sui generis* alternatives for adapting the existing patent regime to better account for the interests of Indigenous communities. At the end of the day, however, despite his well-substantiated critique, Mgbeoji reveals his commitment to the patent system which he criticizes, subject to its adaptation to improve its instrumentalist design and constructive influence amongst varied nation-states. But what is left unclear is which of the competing communities with the same traditional knowledge or plant germplasms should secure better title. By preferring patent reform over other viable alternatives, Mgbeoji, the IP lawyer, seems to betray Mgbeoji, the critical scholar, who has laboured to reveal the dysfunctionality of existing governance mechanisms in protecting against biopiracy. The dominance of rule orthodoxy and the pervasiveness of power paradigms seem to implicitly

20. *Ibid.* at 28 [footnotes omitted].

21. *Ibid* at 12.

22. In relation to human genetic resources, see Bita Amani and Rosemary J. Coombe, "The Human Genome Diversity Project: The Politics of Patents at the Intersection of Race, Religion, and Research Ethics" (2005) 27 Law & Pol'y 152.

influence Mgbeoji's selection of remedial choices. While he articulates the possibility for *sui generis* forms of controlling Plant Genetic Resources (PGRs), he inevitably lapses into an existing proprietary structure:

> [T]he appropriation of TKUP [traditional knowledge of the uses of plants] is a predictable and intentional theft of indigenous and traditional knowledge and resources. It is a phenomenon that also implicates plant genetic diversity, global food insecurity, and the various individual and collective human rights of indigenous peoples. *Ultimately, at the heart of the debate is what policy direction the patent system should take in order to benefit the global community.*[23]

If Mgbeoji has subtly acquiesced to the very structures against which he registers his resistance, he will have exemplified the greatest struggle that Indigenous communities face from colonialist insurgence: it is not the preservation of their own rights to use; rather, it is the protection of their worldviews from convergence with exigent ideals peripheral to their own, due to the reality of economic, political, legal, cultural, and intellectual—though often subtle—pressures for assimilation.

Mgbeoji's book is dedicated to fostering a better understanding of the forces that both perpetuate and worsen the incentives for global biopiracy. He does this by contextualizing the development of dominant regulatory regimes over traditional knowledge and critiquing the hegemonic means by which knowledge and science gain social legitimacy. Accordingly, Mgbeoji successfully meets his objective "to reconstruct a framework for understanding how the doctrines, principles, and cultural dimensions of patent law facilitate and legitimatize the theft and appropriation of indigenous peoples' biocultural knowledge."[24] In so far as he challenges the dominant narrative with his own subversive counter-narrative, he has filled a significant gap with a perspective that is distinct and has supported it with ample evidence. One need not agree with Mgbeoji on all points of his analysis to conclude that his is a valuable contribution to the discussion of global biopiracy.

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23. *Supra* note 1 at 8 [footnotes omitted, emphasis added].

24. *Ibid.* [footnotes omitted].