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Enacting International Laws & Implementing Public Policies to Protect the Rights of Indigenous Peoples to Knowledge and Biodiversity: Challenges & Opportunities

Prof. William O. Hennessey

Nigerian Institute of Advanced Legal Studies

Editor

Professor Adebambo Adewopo

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Peoples to Knowledge

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ENACTING INTERNATIONAL LAWS AND IMPLEMENTING PUBLIC POLICIES TO PROTECT THE RIGHTS OF INDIGENOUS PEOPLES TO KNOWLEDGE AND BIODIVERISTY: CHALLENGES AND OPPORTUNITIES

By

William O. Hennessey*

Introduction

Visiting other nations is, for Europeans equal to conquering them; treating those countries as if they belonged to no one, and so starting a process of continued oppression of the original inhabitants. Imanuel Kant, Zum Ewigen Freiden, 1795.[1]

Rapid globalization is challenging the development of international law as never before. Global epidemics, global cultural and technological developments, and global

*. B.A. Biology, Brown University, Ph.D. East Asian Languages and Literatures, University of Michigan, J.D. Franklin Pierce Law Center, Professor of Law, Franklin Pierce Center for Intellectual Property, University of New Hampshire School of Law, Concord, New Hampshire, USA; Visiting Professor of Law and Co-Director, Intellectual Property Summer Institute, School of Law, Tsinghua University, Beijing, China. Prof. Hennessey is also Co-Founder of the Traditional Knowledge Online Database at *http://www.traditionalknowledge.info* and a member of the International
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culture and the global economy (indeed, between tradition and modernity) could not be more delicate.

In 2002, conceptual framework for national recognition of rights to identification, information, participation, benefit sharing, conservation, and preservation for the holders of traditional knowledge and folklore was proposed, and do not intend to revisit that discussion here.[4] Since that time, proposals have been made for an international regime on access and benefit sharing by the Secretariat of the CBD, pursuant to Paragraphs 44 (n) and 44(o) of the Plan of Implementation adopted by the World Summit on Sustainable Development held in Johannesburg in September 2002.[5]

I would like to point to several emergent challenges to enacting international laws and implementing public policies in the area, and point out potential opportunities that those challenges create. The ultimate question of whether it will be feasible to enact a legally binding international regime on "Access and Benefit Sharing" [ABS] prior to the broad implementation of consistent laws at the national level needs to be faced.[6]

4. William Hennessey: Toward a Conceptual Framework for Recognition of Rights for the Holders of Traditional Knowledge and Folklore, Proceedings of the WIPO Caribbean Symposium on Indigenous Knowledge and Folklore, Port of Spain, Trinidad & Tobago (February 2002) download available at

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The International Dimension: What should come First ? An International Regime or Domestic Laws?

As a 2003 report of the Convention on Biological Diversity [CBD] *ad hoc* working group on these issues noted:

The Conference of the Parties of the CBD [7] has requested the *Ad Hoc* Open-ended Inter-Sessional Working Group on Article 8(j) and Related Provisions to consider non-intellectual-property-based *sui generis* forms of protection of traditional knowledge, innovations and practices relevant for the conservation and sustainable use of biodiversity.

Proposals for an "international regime" for the protection of TK and genetic resources were suggested, implementing Articles 8(j) and 15 of the CBD.[8] But international law is subject to the consent of nation states, and unless a peremptory norm of international law from which no derogation is permitted (*jus cogens*) is established, no state is forced to participate in such an international regime.[9]

policy space afforded by such standards." See *WIPO/GRTKF/IC/9/6 supra*, at p.4.

7. WIPO/GRTKF/IC/9/6 (9 January 2006) p. 3, referring to paragraph 6 (b) of decision VII/16 H.
8. See also Measures to Ensure Compliance with Prior Informed Consent and Mutually Agreed Terms UNEP/CBD/WG-ABS/4/CRP.3 (3 February 2006) and Other Approaches, As Set Out in Decision VI/24B, Including Consideration of an International

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What is the most effective method for creating a regime that will draw wide participation of states? And what can states that support the creation of such a regime do internally to create the conditions for that wide participation?

The Historical Challenge and Appiah's Narrative: Addressing the "Unjust Enrichment" of Colonial Oppressors

The regions and indigenous peoples of virtually all developing countries (and indeed, of developed countries such as the United States, Canada, New Zealand and Australia) are rich in culture, knowledge, traditional customs, and biodiversity. How should laws be enacted and public policies implemented to protect that richness? And for whose benefit? In a 2006 article,[10] Kwame Anthony Appiah, distinguished Professor of Philosophy at Princeton University, reminisced on returning to his home town of Kumasi, Ghana:

> The history of plunder–the barbarism beneath the civility–is often real enough, as I'm reminded whenever I visit my hometown in the Asante region of Ghana. In the nineteenth century, the kings of Asante–like kings everywhere–enhanced their glory by gathering objects from all

town of Kumasi, Ghana:

> The history of plunder–the barbarism beneath the civility–is often real enough, as I'm reminded whenever I visit my hometown in the Asante region of Ghana. In the nineteenth century, the kings of

> destroyed the Asante capital, Kumasi, in a "punitive expedition" in 1874, he authorized the looting of the palace of King Kofi Karikari, which included an extraordinary treasury of art and artifacts. A couple of decades later, Major Robert Stephenson Smyth Baden-Powell…was dispatched once more to Kumasi, this time to demand that the new king, Prempeh, submit to British rule. Baden-Powell described this mission [thus].

Once the King and his Queen Mother had made their submission, the British troops entered the palace, and, as Baden-Power put it, "the work of collecting valuables was proceeded with." He continued:

> There could be no more interesting, no more tempting work than this. To poke about in a barbarian king's palace, whose wealth has been reported very great, was enough to make it so. Perhaps one of the most striking features about it was that the work of collecting the treasures was entrusted to a company of British soldiers, and that it was done most honestly and well, without a single case of looting.[illegible] more tempting work than this. To poke about in a barbarian king's palace, whose wealth has been reported very great, was enough to make it so. Perhaps one of the most striking features about it was that the work of collecting the treasures was entrusted to a company of British soldiers,

British officer was a legitimate transfer of property. It wasn't looting; it was collecting.[11]

Of course, similar anecdotes pepper the history of the overseas colonies of European nations the world over: from Mexico City, to Cuzco, Peru to Peking, China, and everywhere in between from the 15th through the 20th centuries.[12]

European imperialism was not very different from the imperialism of other earlier or contemporaneous empires (Turk, Arab, Roman, Persian, Mongol, Chinese, Manchu, Aztec, Inca, etc); or indeed, Akan. The Ghanian Empire at the peak of its power from the eleventh century extended from the Atlantic Ocean to Timbuktu and encompassed many different indigenous peoples. Nevertheless the European colonial system was far more systematic in organization, extractive (indeed rapacious) in its economic activity, and extensive in geographical scope. The continent of Africa was the centerpiece of the European colonial system. (There were only two African states at the Versailles Peace Conference in 1919, Liberia and Ethiopia, because every other bit of African land was controlled by one or more European powers.) That was a time when

system. (There were only two ... Versailles Peace Conference in 1919, Liberia and Ethiopia, because every other bit of African land was controlled by one or more European powers.) That was a time when

11. *Id.*
12. The Yuan Ming Yuan Summer Palace built by the Italian Jesuit priest

"the sun never set on the British Empire.[13] The "Gold Coast" was part of that empire.

Professor Appiah, having lamented the historical fact of this depredation of the Asante Empire by the British, proceeds to ask the much more difficult question: What are we to do about it now? Pass a law? To what effect? As befits a professor of philosophy intent upon provoking discussion, his conclusions are extremely controversial. For example, he suggests that a state such as Mali can pass a law against the digging and export of the exquisite terra cotta sculptures of the old city of Djenne-jeno. But who is going to enforce such a law against such misappropriation? It is often the people of Mali who are digging up the sculptures – not foreigners. Will the government of Mali enforce the law, when so many Malians are more than willing to export their "national heritage" for personal gain in violation of it?

Are the post-colonial African, Latin American, or Asian governments of Europe's former colonies the "owners" of the cultural artifacts and biodiversity that happen to be found within their territory? African peoples strongly believe that ownership of land is the supreme source of economic and political power. In the proverb of the Akan N'zema tribe, "All power comes from the land".[14] Assuming that post-colonial sovereign states "Asian" governments of Europe's former colonies the "owners" of the cultural artifacts and biodiversity that happen to be found within their territory? African peoples strongly believe that ownership of land is the supreme source of economic and political power. In the proverb of the Akan N'zema tribe, "All power comes from the land".[14] Assuming that post-colonial sovereign states "own" the cultural patrimony and biodiversity within their territories, are they now under any obligation to preserve it? Should it be the responsibility of governments to

protect knowledge, culture, traditions and biodiversity from any exploitation whatsoever by outsiders? Or should they encourage outsiders to exploit it but pay for it?[15] Should laws limit the use of knowledge and biodiversity only to the members of the tribe or tribes of indigenous people from which such knowledge or biodiversity originated? (Who owns it if the original tribe no longer exists?) Or should such protection be for all the tribes, or all the citizens of the state to enjoy equally, including other indigenous peoples from other regions of the country? Or should they protect it for the benefit of nationals of other states as well, including those of their former colonial masters–the wealthy developed countries of the North? Or, practically speaking, do such riches in fact belong to whoever holds political power in the country, to be enjoyed by one family or a small group of politically elite families to the exclusion of the rest of the population?

Should the sovereign state be deemed the "sole proprietor" of knowledge and biodiversity within its territory?[16] Or, as Professor Appiah questions, are such

15. "The Intellectual Property (IP) aspect of the overall legal framework can be characterized as setting the limitations or constraints on third parties' use of protected materials: or, as it was characterized in document WIPO/GRTKF/IC/4/8, giving the holders of TK or TCEs the right to say 'no', and thus ensuring they have a say in

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governments merely custodians of genetic resources and traditional knowledge "in trust"? And if so, for whom?

[W]hat does it mean, exactly, for something to belong to a people? Most of Nigeria's cultural patrimony was produced before the modern Nigerian state existed. We don't know whether the terra-cotta Nok sculptures, made sometime between about 800 BC and 200 AD, were commissioned by kings or commoners; we don't know whether the people who made them and the people who paid for them thought of them as belonging to the kingdom, to a man, to a lineage, or to the gods. One thing we know for sure, however, is they didn't make them for Nigeria.

Indeed, a great deal of what people wish to protect as "cultural patrimony" was made before the modern system of nations came into being, by members of societies that no longer exist. People die when their bodies die. Cultures, by contrast, can die without physical extinction. So there's no reason to think that the Nok have no descendants. But if Nok civilization came to an end and its people became something else, why should they have a special claim on those objects, buried in the forest and forgotten for so long? And even if they do have a special claim, what has that got to do with Nigeria, where, let us suppose most of those descendants now live? Perhaps the matter of biological descent is a distraction: proponents of

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sculptures undoubtedly are–it strikes me that it would be better for them to think of themselves as trustees for humanity. While the government of Nigeria reasonably exercises trusteeship, the Nok sculptures belong in the deepest sense to all of us. "Belong" here is a metaphor, of course: I just mean that the Nok sculptures are of potential value to all human beings.[17]

Appiah suggests that a good compromise would be for the state to sell some of its patrimony on the open international art market, to earn money that could be used to preserve the remainder. The government could also license digs at archaeological sites and educate people to recognize the monetary value of works which have been identified in their cultural context, much greater than the value of works which have been torn from the ground and smuggled out of the country. Even if it were the national museum of the country of origin that wished to keep a cultural object, it would have to pay the market price for it, perhaps from an acquisition fund supported by an export tax on other cultural objects shipped to London or New York for sale in the art houses of Christie's and Sotheby's. Should the governments of the developing countries go into the business of selling bits and pieces of "their" cultural patrimony to wealthy collectors in order to use the funds to preserve the rest?

perhaps from an acquisition fund supported by an export tax on other cultural objects shipped to London or New York for sale in the art houses of Christie's and Sotheby's. Should the governments of the developing countries go into the business of selling bits and pieces of "their" cultural patrimony to wealthy collectors in order to use the funds to preserve the rest?

What if states cannot be trusted to preserve their own patrimony? Although the Chinese people may justifiably complain about the widespread destruction of China's cultural heritage by the British and the French in the 19th Century, even greater damage was done to China's cultural patrimony by its own "Red Guards" during the Great Proletarian Cultural Revolution (1966-1975). [18] Is depredation by a native people to be overlooked and only colonial pillage condemned? In a strikingly similar instance, a Swiss scholar, Paul Bucherer, negotiated with Afghanistan's Taliban Minister of Culture (a moderate in the Taliban government) in 1999 for the removal of the country's non-Islamic antiquities to a Swiss museum for safe-keeping.[19] In early 2001, the Taliban Mullah Omar ordered that Bactrian artifacts and Ghandara figurines in the collection to be destroyed, because they were blasphemous. Soon after, in March of that year, the great Buddhist cliff sculptures of Bamiyan, Afghanistan, dating back over 1,800 years and 56m tall, were demolished by Taliban artillery. Mullah Omar's edict said:

18. On August 18, 1966, Chairman Mao stood before a million young Red Guards in Tiananmen Square in Beijing and put a "Red Guard" armband on. "Red Guards destroyed some 4,922 out of 6,843

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> In view of the fatwa (religious edict) of prominent Afghan scholars and the verdict of the Afghan Supreme Court it has been decided to break down all statues/idols present in different parts of the country. This is because these idols have been gods of the infidels, and these are respected even now and perhaps maybe turned into gods again. The real God is only Allah, and all other false gods should be removed.[20]

Professor Appiah concludes his article with an intriguing suggestion: rather than returning to Ghana the treasures of the Aban, the great stone building in the center of Kumasi which was blown to pieces by the British in 1874, why shouldn't European museums share some of their Western art with the museums of Ghana?[21] After all,

20. Francesco Francioni and Federico Lenzerini: "The Destruction of the Buddhas of Bamiyan and International Law, 14 *Eur. J. Int'l Law 619*, 626. (2003) *http://www.ejil.org/issue.php?issue=27* "Nevertheless, according to a major expert of Islamic religion, Egyptian Fahmi Howeidy, the Taliban edict was contrary to Islam, since 'Islam respects other cultures even if they include rituals that are against Islamic law.' *id.* at 627.
21. "Picasso and Africa", the most extensive exhibition of the artist's work ever assembled in Africa, was due to open at the Standard Bank Gallery in Johannesburg, South Africa, on February 10, 2006 and will travel to the Iziko South African National Gallery in Cape Town in April. What inspired his genius?

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many of the treasures in the Aban were also war booty.[22] Are not all empires prone to plunder other peoples? Are not virtually all museums and royal palaces in fact storehouses of plunder and grave robbery?

Appiah is Ghanian by birth, now American by residence and career, but clearly "cosmopolitan" in his cultural attitudes, as evidenced by the city in which his newspaper article was written. Should African nation-states or their peoples adopt such an open attitude toward their cultural heritage when so much of it remains in the developed countries of the North? According to him, asking European countries to hand back objects stolen centuries ago is fruitless. "I don't think we should demand everything back, even everything that was stolen; not least because we haven't the remotest chance of getting it. Don't waste your time insisting on getting what you can't get".[23]

Appiah is being deliberately provocative. He is challenging us to find ways of transcending the lingering sense of injustice that pervades post-Colonial states over

interposes itself between us and the hostile universe, a means of seizing power by imposing a form on our terrors as well as on our desires." *The Economist* (Feb. 11, 2006) *http://www.economist.com/displaystory.cfm?story_id=5491943.*
22. Appiah, at 41 He even suggests that the Asante King got the idea for the building of the Aban from what he had heard about the magnificence of the British Museum.

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what happened to their peoples in prior centuries. He gives evidence that the understandable distrust in developing countries, engendered by this lingering sense of injustice, poisons political and economic cooperation between developed and developing countries to this day. But who is that distrust hurting more, the former colonial masters or the peoples of the former colonies?[24]

The modern focus of this post-colonial debate is not on the ownership of gold trinkets in museum collections; rather it is on the new "green gold" – genetic resources in developing countries and the information about them that is "in the hands and minds" of traditional peoples. And the perceived adversaries of traditional peoples are no longer the governments of developed countries directly as colonial powers; rather they are the multinational companies of those developed countries and the system of global capitalism (call it "neoliberalism" or, more pejoratively, "neoimperialism").

The Present Challenge: Stopping Biopiracy without Stopping Economic, Social, Cultural, and Technological Development Cooperation

In a 2006 report entitled "Out of Africa: Mysteries of Access and Benefit Sharing" published by the Edmonds Institute in cooperation with the African Centre for Biosafety, Jay McGown researched the international patent database for indications as to the state of development of benefit-sharing between multinational companies and the

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regions of Africa from which their products originated.[25] McGown made a tremendously valuable contribution to the literature, cataloging medicines, cosmetics, agricultural and horticultural products that have their origins in biodiversity from African countries. The collection of such knowledge is the first step in its protection. The report's conclusion was depressing to the author of the study, in that he was unable to find any indication of benefit-sharing for most of his findings. He even suggests that all access by multinationals to developing countries be stopped until an international system of protection is in place.[26]

But ironically, without the international system of patent disclosure requirements (the word "patent", after all, means "opening up"), Mr. McGown would not have been able to produce his study in the first place! And what McGown has done is to use the tools of the intellectual property system to acquire the necessary skills that TK and biodiversity that stakeholders need to respond.[27] Despite McGown's depressed conclusions, the substance of his study is a cause to rejoice in the TK and biodiversity communities. He is using the long traditions of IP protection (search for patents or "mining patent

25. (Edmonds Institute 2006) *www.newscastmedia.com/lootingafrica.pdf.*
26. It's a free-for-all out there, and until the parties to the Convention on Biological Diversity (CBD) solve the problems of access and benefit sharing, the robbery will continue. They've got to declare a

property system to acquire the necessary skills that TK and biodiversity that stakeholders need to respond.[27] Despite McGown's depressed conclusions, the substance of his study is a cause to rejoice in the TK and biodiversity communities. He is using the long traditions of IP protection (search for patents or "mining patent

information") to create the basis for others both to challenge those who steal and to protect those who have preserved traditional knowledge. It is "bioprospecting" in reverse. And despite his frustration at not finding ABS agreements, the "difficulties" he encountered are just the sort of questions patent attorneys in the United States ask of their clients, day in and day out.[28] He is using the

28. How to fix the exact date of accession or acquisition when the only date discoverable is the date on a patent application? The date of accession is important because that is the date which may determine the applicable national rules of access. For some countries, access rules changed after they became parties to the Convention on Biological Diversity.
- How to verify the exact country from which material has been taken when the written record about an acquisition may only describe the origin as "African"? (McGown opted to consider any countries or regions mentioned in the relevant patents to be the country or countries "out of" which the biodiversity might have been taken.)
- How to deal with prior informed consent and benefit sharing issues or even determine who may properly consider themselves to have been robbed (biopirated) when the material or knowledge taken may be widely available in (or endemic to) several places? ---How to deal with access and benefit sharing issues related to biodiversity not well covered by established treaties, as in the case, for example, of biodiversity taken from the sea? Put another way, how to deal with issues that may fall outside the ambit of international law but not outside the bounds of human decency?
- How to track whether anyone - national authorities, appropriate indigenous authorities, or local communities [illegible]

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traditions of intellectual property practice to create the conditions for protection of GR and TK from misappropriation.

What do I mean by "traditions of intellectual property practice?" We usually think of traditions as being bodies of information and customs that have been handed down from our ancestors. For example, the great Chinese philosopher Confucius (551-479 BC) was extremely opposed to the creation of anything new in Chinese society, preferring to require his followers only to hand down from the ancestors that which was old.[29] But all

of the paper trail for biodiversity depends on patent applications. As already noted, anything that has been acquired but not yet been made the subject of a patent application may not have been discoverable by McGown's research method -- despite the fact that, as McGown's work makes clear, some patent offices are granting patents for "inventions" of questionable novelty. Further, how to deal with the difficulty of tracing biodiversity when some source countries do not concern themselves with benefit sharing issues until and unless a commercializable product is in sight? Such post-access concern for benefit sharing tends to preclude the valid prior informed consent of indigenous peoples and local communities and create effective biopiracy.
- How to understand who has played what role and with what responsibility in biodiversity dealmaking? How to differentiate poor bookkeeping, lack of transparency, lack of law, lack of enforcement, and corruption? How to assess the role, performance, and loyalties of (biotrade) intermediaries, including

granting patents for "inventions" of questionable novelty. Further, how to deal with the difficulty of tracing biodiversity when some source countries do not concern themselves with benefit sharing issues until and unless a commercializable product is in sight? Such post-access concern for benefit sharing tends to preclude the valid prior informed consent of indigenous peoples and local communities and create effective biopiracy.
- How to understand who has played what role and with what responsibility in biodiversity dealmaking? How to differentiate poor bookkeeping, lack of transparency, lack of law, lack of

traditions have to be created by someone (including those that were created by Confucius!) Rather than being the opposite of creation, tradition is a form of creation: a gradual, incremental creation of valuable human heritage over many generations. The "creation of tradition" consists of remembering what has been passed down and passing it to the next generation with some individual contribution, great or small. Why do I speak of "traditions of intellectual property protection?" Because there is a well-developed body of "traditional knowledge" about the way intellectual property protection works that is handed down from one generation of patent solicitors to the next, for the benefit of their clients. As the philosopher Alfred North Whitehead said in 1926 about Thomas Edison's research facility at Menlo Park, "the greatest invention of the 19th Century was the invention of the method of invention."

One major condition for the creation of a system of protection for any knowledge is in the development and refinement of a process of collecting, documenting, categorizing, and organizing customs and practices which have been used for decades or even centuries, but which previously had only passed down from one practitioner to another and never written down. This is what the patent solicitor calls "the prior art.[30]

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Until the 1980's, China had no intellectual property system to speak of. But the tools for such a system were already in place in the cataloging of biodiversity and traditional knowledge in ancient China. An interesting historical example of the preservation of knowledge of herbal medicine in China is the "Great Compendium of Herbs" (*bencao gangmu* 本草纲目) which was published in China in 1578 by a Confucian scholar, Li Shizhen 李时珍 (1518-1595). The book collected information about 1,892 medicinal substances (1,094 from plants; 444 from animals, and 275 from mineral sources), including 374 items which had never been catalogued in China before.[31] "Li collected

etc.) should also be maintained and recorded along with any claim in order to preserve the cultural context and depth of the knowledge.

In documenting TK, communities should attempt to use local place names, community concepts and terms in describing knowledge. It is strongly advised that local communities create dictionaries or glossaries of special terms or local words and phrases used to describe TK. A dictionary or glossary will help others outside the community in matching local terms to those in a dominant language should the community decide to share its knowledge.

See Stephen A. Hansen and Justin W. Vanfleet: *A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity,* AAAS (2003) *http://shr.aaas.org/tek/handbook.pdf.* Of course, the disadvantage of such documentation is that it is no longer secret, and may be freely used by any reader if not carefully protected by legal mechanisms. The

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See Stephen A. Hansen and Justin W. Vanfleet: *A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their*

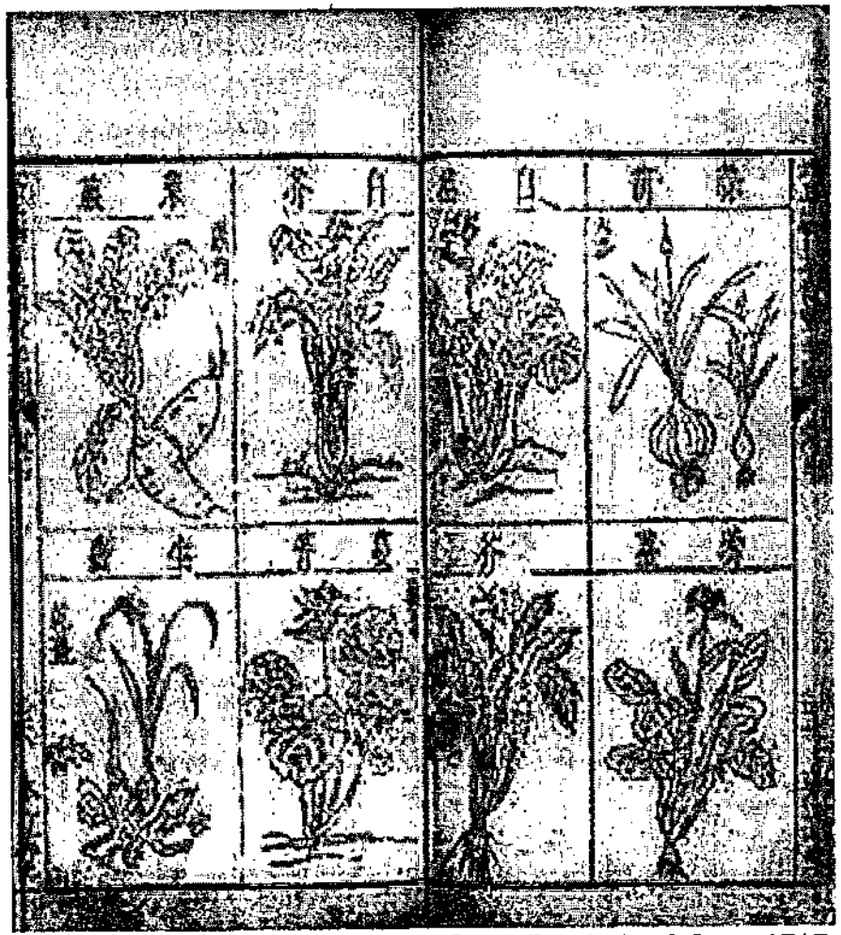
virtually all the prescriptions that had been handed down over the centuries and then presented over 11,000 formulas: about 2,000 of these were well known from other medical works, but over 8,000 were collected by Li from contemporary doctors and rare texts." [32] The Compendium quoted from 952 previous authors and provided a bibliography of 271 books on medical subjects and herbs and 591 other texts, such as literary classics and historical works. [33] The great 20th century historian of Chinese science and technology, Dr. Joseph Needham of Cambridge University, declared the Compendium to be "the greatest scientific achievement of the Ming Dynasty (1368-1644)." [34]

The story of how Li Shizhen's Compendium became famous contains several valuable and instructive lessons. Li's father and grandfather had trained as traditional medicine men, and devoted their lives to healing patients and passed their knowledge from father to son. But Li Shizhen himself was trained for a career as a scholar-official, and it was only after he decided to abandon that career in his early twenties that he became a collector of a body of medical knowledge available to a general audience rather than for the private use of his own family. After he submitted the work to the Imperial Palace of the Ming Dynasty for its approval, his book was virtually unknown in China during his lifetime because the palace was so slow to publish it. It was not until the very end of the Ming dynasty in the 1630's, over a half century after the work

Emulation" see *http://www.itmonline.org/arts/lishizhen.htm*, from which information in this paper about Li Shizhen has been obtained.

32. *Id.*
33. *Id.*
34. *Id.* citing sources.

was published, that it received wide distribution in China, and was translated into Japanese (abridged version in 1637; more complete version in 1783), Latin (1656), French (1735), English (1736 and 1741 by different British translators), Russian (1868) and German (1895).



Book pages from Sam Fogg Book Store (London) ad for a 1717 edition of Bencao Gangmu, showing the revised illustrations first provided in the 1640 edition.

Li Shizhen's Compendium of Herbs is testament to the richness of traditional medical knowledge in China, and has become part of the common heritage of mankind. In the process of compiling his Compendium, he took knowledge that had formerly been secret and "opened it up" for anyone who could read his work in any of those many languages.[35] Any casual visitor to modern China can attest to the continuing and pervasive role that traditional Chinese healing methods plays in Chinese society, even in large cities such as Beijing and Shanghai. (I can personally attest to the efficacy of traditional Chinese healing methods, having benefited from them on more than one occasion).

Before China decided to transform its "socialist market economy" and to open up its market to the outside world in the late 1970's, such information was never formally "capitalized" upon by the Chinese people. It was anyone's for the taking. But with the building of a strong intellectual property regime in China in the 1980's and 1990's, works such as those by Li Shizhen centuries ago have become the foundation for a rapidly growing "portfolio" of valuable intellectual property in China in the form of patentable "new" traditional knowledge based upon traditional Chinese medicine (TCM). In a recent paper, I have commented on this growing trend.

Many of these plant-based medicinal treatments, insecticides and fungicides appear have the character of what has been called "new traditional knowledge." [Yinliang] Liu defines "new traditional knowledge" as new

35. Similar important collection work on India's Auyurvedic healing methods is being done at the Indian Institute of Auyurvedic Medicine & Research in Bangalore, which I had the great good fortune of visiting in the summer of 2005.

knowledge created by new generations who base or partially base their creations on traditional knowledge. Basically, traditional knowledge has the following characteristics: (1) it may involve a process or a product; (2) it can be expressed in one of the most used languages worldwide or in one indigenous, local or tribal language; and (3) it has been and will remain part of traditional knowledge, on which other new traditional knowledge could be created. Liu describes the patenting of "new" traditional Chinese medicine (TCM) in China, where the novelty lies in (1) new techniques for preparing TCM, (2) isolation of active components in TCM products, (3) new applications for TCM (e.g., anti-HIV/AIDS, anti-cancer), (4) new combinations of TCMs and Western medicines (combination immune-antibiotics) and (5) new pathways for administering TCMs.[36]

Critics of the international IPR system protest when MNC's patent traditional knowledge. But "new traditional knowledge" which meets the criteria of patentability should be patentable by anyone, including the original holder. There is economic wealth in cultural expressions, traditional knowledge, and biodiversity. In addition to protection under patent law, some of this can be protected under copyright law, trademark law, and geographical indications. What is needed among stakeholders is awareness of the "traditional knowledge of how to protect IP." *Sui generis* systems are certainly needed for the

36. William Hennessey: "Changing Traffic Patterns in Technospace" 2005 *Mich.St.L.Rev. 201, 216* (2005) *citing* Yinliang Liu, "IPR Protection for New Traditional Knowledge: With a Case Study of Traditional Chinese Medicine," 25 *Eur. Intell. Prop. Rev. 194 (2003)* available at *http://www.faculty.piercelaw.edu/hennessey/MichiganStateLawReview.pdf.*

protection of "old traditional knowledge." But "new traditional knowledge" should belong to those who created it. Significantly, without the *traditional knowledge of how to protect intellectual property* which every MNC has in great abundance, stakeholders in developing countries are helpless to prevent its loss and misappropriation.

In distinction from cultural artifacts, traditional knowledge, and biodiversity, "intellectual property" does not exist in natural or cultural objects; it comes into existence only within the framework of a sound legal system recognizing private rights. An empirical study by Professor William Lesser at Cornell University suggests that a well-functioning intellectual property system requires a well-functioning legal system to support it.

[W]ith regard to IPRs and foreign direct investment (FDI), the "strength" of national IPR systems was found to be strongly associated with levels of FDI for 44 developing countries in the post-TRIPs world [and] may be result of well functioning economy and legal system rather than just strong IPR's.[37]

Policy-makers in China, until recently a poor but developing socialist country, have made a conscious decision to build a strong internal legal system for the protection of private intellectual property rights. It has overcome its focus on the wrongs of past oppression to become a player in the modern global economy, and Chinese research institutions and firms are now building their own "portfolios" of intellectual property assets. It is actively acquiring knowledge of how to protect IP from

37. William Lesser: "Intellectual Property Rights in a Changing Political Environment: Perspectives on the Types and Administration of Protection" 8 AgBioForum (2005) Paper No. 2, *http://www.agbioforum.org/v8n23/v8n23a02-lesser.htm.*

developed countries by studying the IP systems of Europe, the United States, Canada, Australia, New Zealand, and Japan. China is a society with long traditions, and its people went through a period of a century and a half of internal and external catastrophes trying to figure out for themselves a road to modernization without destroying the best parts of those traditions. Many of China's people are still poor, but gradually, conditions for the betterment of its people are being put into place.

But the Chinese are not alone. Professor Angela Riley, who is also a Judge in the Tribal Court of the American Indian Potawatomi tribe in the State of Oklahoma, has proffered her recommendations for protecting the intellectual property of her indigenous people:

> While there are many valid criticisms of the expansion of intellectual property rights, a distinction must be made between agreements like TRIPS, for example and efforts by indigenous groups to protect intangible cultural property. Critics' concerns regarding the imperialistic imposition of Western notions of property on less "sophisticated" countries and communities are well-taken. However, a proposal for the development of *sui generis*, grassroots intellectual property rights by indigenous groups actually operates against those Western efforts...

Because Western intellectual property laws simply do not protect indigenous peoples, the recognition of

property rights in cultural property and traditional knowledge should not be viewed as increased propertization. To the contrary, the development of *sui generis* systems would allow indigenous peoples—who for so long have been unable to avail themselves of the protections of intellectual property laws—to finally control the integrity, disposition, and appropriation of their sacred knowledge. Thus, rather than extending additional rights to indigenous peoples, this proposal merely puts indigenous groups on the same footing as other citizens.[38]

Is the way forward for countries to embrace robust and enforceable customary and national laws recognizing private property rights to prevent misappropriation by powerful outsiders? Or is it to call for "international moratoriums" on access until biopiracy is stopped? Without well-functioning customary national legal systems, it is very difficult (as Jay McGown has discovered) to ascertain what "property" there is to steal. Professor Riley's approach is to address the questions of ownership, definition, and transferability at the local and national level first. Both the IP-approach and the *sui generis* approach can be employed in tandem. For information about traditional knowledge and genetic resources, the first step is to catalogue and systematize their existence and provenance.

Concerning recent attempts by groups in developing countries to regulate access to their genetic resources, and the negative impact it is having on scientific research, Indian Scholar, Zakir Thomas, makes a distinction between legitimate concerns about "biopiracy" and what

38. Angela R. Riley: "Straight Stealing": Towards an Indigenous System of Cultural Property Protection, 80 Wash. L. Rev. 70, 131(2005) available for free download at *http://papers.ssrn.com*/sol3/papers. cfm?abstract _id=703283.

he calls "bioparanoia," an irrational belief that technological cooperation between bioprospectors (including scientific research institutions in developed countries) and indigenous peoples is categorically unfair and exploitative.[39]

The same month Thomas' article was published, Professor Paul Oldham delivered a paper at a conference at the University of Birmingham discussing the same concept.

"[Professor Oldham] began by outlining the three objectives of the 'Convention on Biological Diversity', namely, those of conservation, sustainable use and fair and equitable sharing. He discussed what he termed the 'grand bargain' whereby the developing countries emphasised the sovereignty of nation states. Accordingly, governments of nation states can give permission/consent for the use of natural resources. States agreed to this bargain for economic reasons. Yet there is increasing unease in the developing world, particularly by groups that are not equivalent of the nation state (e.g. indigenous groups) regarding the use of these resources. In 1995 'biopiracy' was referred to as a 'global pandemic' and [Oldham] suggested that we may now describe the situation as 'bioparanoia'. As a result of bioparanoia, it is increasingly difficult for all companies (whatever their motives and practices) to carry out research in developing countries and

39. Thomas: 'Common Heritage to Common Concern" *8 JWIP, 241* (2004).

as a result important research (especially in Latin America) is not being done".[40]

Not only is scientific research for the benefit of the entire human community impeded; those who believe in placing obstacles in the path of cooperation may be hurting, not helping, local interests of traditional peoples. The task of learning to use property rights as a tool to defend against misappropriation is an arduous one. China's patent system is just 20 years old but has become one in which 9 out of every 10 patent applications filed in China are filed by Chinese nationals. International norm-building is indispensable, but without a strong framework of national and tribal laws recording the existence of rights over cultural expressions, traditional knowledge, and biodiversity, the likelihood that a binding international regime will be effective in stopping biopiracy is highly doubtful.

40. Later published, see Paul Oldham: "Biopiracy and the Bioeconomy" in Glassner, *et al*, New Genetics, New Social Formations, (Routledge 2007) 114, 131.