**Biopiracy is a problem that continues to steal and use indigenous knowledge for commercial benefit.**

**McGonigle 16**

McGonigle, Ian(PhD Candidate in Anthropology and Middle East Studies at the Center for Middle Eastern Studies at Harvard University.) “Patenting nature or protecting culture? Ethnopharmacology and indigenous intellectual property rights” Journal of Law and the Biosciences, 6 February 2016. <https://academic.oup.com/jlb/article/3/1/217/1751287> // LHP NP

In the 1990s, **activists responded to** the work of **corporations negotiating trade contracts** for access to the biological resources of developing countries **using the term ‘biopiracy’** **to describe the illegitimately deemed**, and sometimes illegal, **resource extraction that** such **companies engaged in**. Since the 1990s, commercial drug development from natural products has subsided significantly. Today most ethnopharmacology research is conducted within academic institutions. For practicing ethnopharmacologists, **sufficient modifications of a plant substance** or traditional therapy **for legal proprietorship are rather simple**. **This may be as little as an alteration to the chemical structure** of the active compound of a medicine, **a small inventive step**, **or** the **use of a** **semisynthetic chemical analog**, a slightly modified version of the original compound. Perhaps, the most notable example of this kind of proprietorial move occurred in the case of the **indigenous peasant farmers of rural Mexico** (Oaxaca), who **cultivated** **barbasco yams and sold them for use in the burgeoning Mexican pharmaceutical industry**. The barbasco yam (Dioscorea Mexicana), also simply called the Mexican yam, produces the steroid compound diosgenin, which is a precursor for the synthesis of the female sex hormone, progesterone. **These yams were instrumental in the development of the female contraceptive pill during the** 19**70s** and 19**80s**. **Peasants’ expert ecological know-how** **became** publicly **recognized** **through their central role in** the **bioscience development of Mexico**, **but in the 1990s**, **developments** **in synthetic chemistry made the** wild **yams redundant as a source**, **cutting out the peasants from the commercial networks and eliminating their role in the industry altogethe**r. In this case, the drug product that the indigenous peasant farmers helped to produce ultimately led to their exclusion from downstream benefits. **Rather than affording protection to indigenous knowledge and contribution, the law allows companies to cut off any rights of the bearers of the indigenous knowledge that initially made the development possible. The current international regime favors the interests of commercial parties that can develop a synthetic alternative.**

**Protection of indigenous pharmacology is needed now, we cannot allow the threat of our current IPR system to continue the cycle of robbing indigenous knowledge. Ezeanya13**

Ezeanya, Chika A.. “Contending Issues of Intellectual Property Rights Protection and Indigenous Knowledge of Pharmacology in Africa South of the Sahara.” The Journal of Pan-African Studies 6 (2013): 24-43.//LHP MS

There is need for an appropriate global intellectual property system to protect against the misappropriation of Africa’s traditional knowledge by the West. Oguamanam (2004) argues that the **present international system of IPR** **protection**, especially the patent regime, **benefits the ‘western scientific** or biomedical **model**,’ **and could be** considered a **threat to the continued existence and development of traditional medicine in Africa**. The holistic approach of indigenous medical heritage is in stark contrast with conventional biomedical and intellectual property regimes. Therefore, the yardsticks of the western scientific knowledge when used in protecting indigenous medical knowledge would result in what Oguamanam calls, “an alien standard of validation based on a narrow epistemic genre- western science” (Oguamanam 2006, 34). **There is an urgent need for the adoption of** culturally oriented and sensitive approach toward **the protection of African indigenous pharmacology**.

**Exploitation of indigenous knowledge reproduces settler logic or elimination.  Ezeanya5**

Ezeanya, Chika A.. “Contending Issues of Intellectual Property Rights Protection and Indigenous Knowledge of Pharmacology in Africa South of the Sahara.” The Journal of Pan-African Studies 6 (2013): 24-43.//LHP MS

**Indigenous knowledge** is the variant of knowledge that is generated, and which **resides within a given locality.** **It is the outcome of generations of** working with and **understanding one’s environment** to produce the best possible processes for addressing specific challenges. Indigenous knowledge has been defined as the unique, traditional, local knowledge existing within and developed around specific conditions of women and men indigenous to a particular geographic area” (Warren, 1991). The World Bank notes that **indigenous knowledge is “**developed and adapted continuously to gradually changing environments and passed down from generation to generation and **closely interwoven with** people’s **cultural values**” (2013). Scholars in trying to understudy indigenous knowledge tend to descend into a comparison with western knowledge. **Evaluating indigenous knowledge in comparison to western science**, according to Oguamanam, **presupposes** **an, ‘overarching comparator in the form of universal reason** or science, **which is ontologically privileged’** (Oguamanam 2006, 4). **Such comparison places western science** at a vintage point **as** the **superior** form of knowledge, which other forms must seek to measure up to. The need for comparison between Western and indigenous knowledge is not necessary since there is in existence, a baseline of universal reason in every culture, “enforced by shared human economic need and cognitive processes although, activated and expressed in different cultural contexts.” (Oguamanam 2006,15).  What exists between Western form of knowledge and traditional knowledge is a marked difference in approach that gives each a distinguishing identity. The distinction must not be equated with superiority and therefore, does not justify the exclusive appropriation of validity to Western knowledge system. These differences are philosophical in nature, arising from the differences in socio-cultural processes and worldviews. Some of these differences are enumerated (Oguamanam 2006, 16).

**Thus the alternative is to strengthen certain Intellectual Property Rights methods to better protect indigenous knowledge. This can be implemented in a number of ways - Removing time limits on patents for Indigenous people, allowing for the patentability for knowledge that isn’t created by one person in particular, etc.**

**De Cunha**

Manuela Carneiro da Cunha  (Dr. Penelope Harvey Department of Anthropology University of Manchester Brunswick Street Manchester M13 9PL England)“Exploitable knowledge belongs to the creators of it: a debate” Wiley Online Library, https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1469-8676.1998.tb00385.x

In Chamisso’sstory, aman (Peter Schlemihl) sells his shadow to the Devil, who rolls it up and takes it away, A shadow is an awkward thing to sell, although it is undoubtedly one’s own. **Strange things are being transacted nowadays, both material and immate rial**: blood, tissues, organs, sperm, ovules, embryos, but also ideas, shapes, images, voices ... In other times or other places, people were sometimes selling their very souls. Our debate today could actually be phrased: ‘**Are we selling our souls by allowing knowledge to become its creators’ private property?**’ I w ill try to show that it is precisely the ultimate obstacle to putting our souls on the market. One could argue that rights in knowledge are actually not really new. Information and knowledge, or at least some of it, have been property for a long time in many societies. Intellectual Property Rights’ western genealogy is usually traced to the Middle Ages and to guild trade secrets. What knowledge and information mean and cover, however, was greatly expanded and this is what we are talking about today. That there should be new objects of ownership need not surprise us. Property rights have a history and topography. The appearance of such objects of ownership is related to two kinds of production: the production of things and the production of identities and status, that is of relationships. Res And.personae as they appear in Roman Law, if you wish. Technology, or more generally how people conceive of the process of production, entails that rights should be ascribed over each and every input. We all know of societies in which proper names, ornaments, songs or spells are crucial for the process of production and thus subject to ownership or other kinds of rights. Technological change or, more broadly, changes in representations on production create new objects of rights. On the other hand, as Veblen, Levi-Strauss, Barth, Bourdieu, Baudrillard and Sahlins (among others, including myself) have pointed out, systems of objects, which emerge and disappear, stand for systems of people and produce identities. Taste and knowledge, which are then relations to these objects, are also ways of distinction among people, something quite exploitable in itself. This is not a different kind of knowledge, something we could call ‘expressive knowledge’: it is rather a different role for it. We thus have two capacities for exploitable knowledge: knowledge in the production of objects and knowledge in the production of identities. They should be discussed separately since they bring up different problems. **What has changed, besides the extension of what is defined as exploitable knowledge, is the degree to which rights in knowledge have entered the market and become alienable property. For property is a highly variable bunch of rights.** In particular, property is not necessarily alienable: land, for example, in Babylonian Law, had been property for long, but was only painstakingly made transactable through a number of ritual fictions (Cassin 1952). Knowledge follows asimilar pattern: although having been property in many places and for a long time, it often was or is not transactable. It has been pointed out in connection, for instance, with conservation issues, that regulation of resources is highly dependent on property regimes. At this point it is important to stress the distinctions between such regimes. A simplistic division is sometimes made between regimes of free access and private property. What is simplistic here is that such a division, although fundamental, fails to consider more elaborate distinctions within private property and takes all private property to be individual private property. Yet there are other viable forms, such as for example collective or even state ownership. As Daniel Bromley (1991) has insisted, there has been an unfortunate confusion between ‘common property regimes’ and ‘open access resources’ . Open access is the kind of regime that is most liable to indiscriminate predation. Let me give you an example from outside the usual anthropological stock. Robert Crumb, the underground cartoonist of the sixties, decided, in a counter-culture move, not to ask for copyright for his characters. As a result, the cartoon ‘Keep Trucking’ was appropriated by the advertising industry, and Crumb now writes an ironic C at the bottom of any of his drawings. **Property is not - and we have that already in Roman Law - just an exclusive right to use and dispose of things. More than a relation between people and objects, it is also and maybe chiefly a relation between people about objects. It is a way of preventing other people putting certain objects to a use one might object to. Property does not necessarily entail the consequence, as I have reminded you, that objects should be put into the market: rather the contrary, it is the only way, given the planetary system of trade, in which they can actually be kept out o f the market. What is the present situation? After** a long period of attempts at revising the 1967 Paris Convention for the Protection of Industrial Property in the framework of the World Intellectual Property Organization (WIPO), the main industrial countries moved to a different forum and were able to have trade sanctions linked to the infringement of Intellectual Property Rights in the GATT/TRIPS Agreement signed in April 1994 (Oman 1994). GATT stands for General Agreement on Tariffs and Trade (from 1947), and TRIPS for Trade-Related Aspects of Intellectual Property Rights Including Trading in Counterfeit Goods. **While the emergence of new knowledge-items is related, as we have seen, to changes in technology and in society, the value they have acquired and the insistence, particularly by the United States, on their global enforcement has been linked by some to the particular position of developed countries in the global system of production**. As manufacturers are increasingly located in countries where labour is cheap, inputs from developed countries become chiefly technological or industrial innovation. **Hence the pressure by developed countries to have patents recognised and enforced worldwide.** It would correspond to an effort by powerful countries to reap more benefits from production in a transnational division of labour. An expanded and revised political economy in which information stands as a productive force (Lash and Urry 1994: 4), would then be accountable for the unprecedented valuation of Intellectual Property Rights (hereafter IPR). It is only a further proof of the place of power in the value attributed to knowledge that it should be denied to so-called collective knowledge. Such denial is based on two grounds: that what has to be stimulated by rewarding it with ownership is invention (as against tradition) and that invention is ascribable to individuals and not to collectivities. Invention is taken in its contemporary sense of creation of the mind (ab nihiloV), while the former sense of ‘discovery’ (as, for example, in the expression ‘The invention of the Holy Cross’ for the discovery by the empress Helen of the True Cross of Christ) is suppressed. Take traditional peoples and their discoveries. These can involve the recognition of the utility of substances, such as rubber or curare. They can be discoveries of processes such as those complex ones involved in the preparation of manioc or of ayahuasca. In ayahuasca it is not one plant but rather the combination of different plants that produces the desired effect. **There is a growing amount of prospecting on the part of pharmaceutical companies, and even the US National Cancer Institute, of the resources particularly of tropical forests. It has been pointed out that indigenous knowledge provides pharmaceutical companies with a priority list for screenings, and that it therefore increases the efficiency of research by 400 per cent** (Balick 1990). As for seed varieties, a 1994 study commissioned by the United Nations Development Programme (UNDP) estimates that indigenous people’s seed varieties account for most of the five billion dollars a year value of germplasm in rich nations’ crops and calls U N D P ’s attention to the fact that ‘the commercial value of developing-country seed varieties and germplasm is not acknowledged and compensated for’ (‘Conserving indigenous knowledge’ by the Consultative Group on International Agricultural Research, quoted in Dayal 1994). **Much indigenous knowledge is thus appropriated yet not compensated for. It is on the market, whether one likes it or not. The point then becomes, as Cunningham (1991) has ably argued, whether it is equitable to have an open access regime for resources at the indigenous end and an ownership property regime at the multinational corporation end. Given that indigenous knowledge is on the market (presently for free), and that is a state of affairs that we are unable to alter, should we not support the proposition that its creators receive a share of the profits?** **This is why a growing number of anthropologists** (such as Boom, Brush, Davis, Elizabetski, Greaves, Kloppenburg and Posey) **have been urging the recognition of IPR for indigenous peoples. Recognising IPR, some say, is a legal framework alien to the way traditional societies handle knowledge. So? The same could be said of the whole political and legal situation in which such societies move nowadays. Were it not so, why should we uphold their rights to have land recognised and demarcated? Is property in land not equally a concept possibly foreign to most indigenous societies? And have anthro pologists not realised that foreign concepts are put to new use and strategically appropriated by weak societies? That they might be, while used as weapons, kept so to say on the boundaries, within spheres that do not mix with internal institutions? Or else, couched in new institutions that follow rules different from the world at large?** Knowledge can be put on the world market by indigenous societies and yet be put in common or distributed along different paths within the group (as it is in traditional academia). The issue that intrigues me, rather, is why we should be discussing this matter here, while no one would contend the right of indigenous peoples to their land? There might be a subtle reason for this. Would it not be that, although we support indigenous land struggles with no restrictions, the issue of knowledge strikes more close to home, as intellectuals and as anthropologists? Traditional academia is a bastion of internal freedom of knowledge, but such freedom is under global and insidious attack (H ill and Turpin 1995). It might seem contradictory to defend ownership of knowledge abroad and open access at home. Furthermore, as anthropologists, we deal precisely with other people’s knowledge. Some might feel post-modern scruples to write about it. Others might fear that by restricting what we can freely write about other peoples is to be cutting the very branch we are sitting on. I do not share those scruples nor those fears. In fact, securing ownership of exploitable knowledge would leave us in a much more easy position. I am presently editing a book, called the Encyclopaedia o f the Forest, which is all about knowledge. This is a result of large team research involving rubber-tappers and three indigenous societies who live on the headwaters of the Jurua river, in Brazilian Western Amazonia. Our guidelines are not to publish anything that could possibly have commercial value, since it would presently amount to putting commercially valuable knowledge into public domain. **If IPR were recognised for traditional societies, such problems would not arise, since they could be secured and published at the same time. But knowledge also appears in connection, as I pointed out at the beginning of my talk, with the production of identities and status.** Many current dilemmas about ownership of knowledge and cultural items in general, for traditional peoples as well as for anthropologists, concern what has been called ‘cultural appropriation’. This involves things such as myths, themes, patterns, artefacts, religious practices and ultimately image, voice and representation. I don’t think the issue is to worry about conflicts over representation between anthropologists and the people they talk about. After all, journalists handle that quite well with more exacting people. The real issue lies elsewhere. That culture is a flow, not a thing, a production not a product, is by now common anthropological wisdom (e.g. Carneiro da Cunha 1992; 1995). **Can we, as anthropologists, uphold the idea of ‘cultural ownership’ at the same time as we realise that culture is in constant flow? Better than answering this in the abstract, we should look into ‘cultural ownership’ debates in their political and historical context, as Coombe (1993) has done for the First Nations in Canada. First Nations claims in Canada were perfectly comprehensible when thought in situ: a history of definitions of identity by a bureaucracy which was committed to the disappearance of language and ceremonies of political weakness, of dispossession of land and pride (Coombe 1993). Let me sum up. I have argued that exploitable knowledge can be related to the production of objects and to the production of identities. In its first capacity, its presence on the market has increased. So too has its value, possibly due to the novel place of developed countries in the multi-national process of production. (Manu factures being increasingly located in third-world countries, the input of powerful countries in production is chiefly knowledge and information. Hence the immense and Successful pressure by developed countries to have IPR infringements linked to trade sanctions in GATT/TRIPS agreement.) Indigenous peoples have developed knowl edge that is valuable for production. Yet that knowledge is not compensated for, due to a western individualistic definition of patents and IPR in general. It is only fair that it should be recognised and rewarded. The present situation is still to have an ideology of common heritage or open access at the indigenous peoples’ level and of private property at the corporations’ level.** On the other hand, how can we reconcile our disbelief in a set of things called culture with the support of culture ownership? **My point is that cultural appropriation debates are ways for dispossessed peoples to phrase claims for power. What is at stake is the authority to define, to represent, to keep or to dispose of, in a word, for lack of a better word, agency. There is nothing contradictory in acknowledging culture to be invented and yet upholding ownership of culture, since cultural ownership is but the local translation for agency and it is agency we are deemed to support. My basic point is that recognising ownership of knowledge in the production of objects is not equivalent to putting it on the market. It is actually the only way in which it might not be sold.** The same principle applies to knowledge in the production of identities. If identitary signs are common heritage, they are like fish in the open ocean, subject to everyone’s predation. Collective ownership is the only way to prevent a hunting season for signs, to avoid their becoming a commodity**. In other words, if we allow exploitable knowledge to belong to its creators, rather than selling our soul to the Devil, we are actually building a barrier, as Polanyi has put it, to the satanic mill.** Addendum. Two days ago, just before catching my plane, I received the news of a press report by COICA, the Co-ordination of Indigenous Organisations of the Amazon Basin. C O IC A is objecting that the US have registered under number 5751 the formula for ayahuasca, submitted by Loren Miller, owner of the International Plant Medicine Corporation. C O IC A urges everyone to protest to the President of the United States for such an appropriation of knowledge, and I submit this pledge to EASA, irrespective of what the results of our debate here might be.

**The standard and role of the ballot is to center indigenous knowledge, creating indigenous empowerment while simultaneously intervening in colonizing structures. Wilson04**

Wilson, Angela Cavender. “Introduction: Indigenous Knowledge Recovery Is Indigenous Empowerment.” The American Indian Quarterly, vol. 28, no. 3, 2004, pp. 359–372., doi:10.1353/aiq.2004.0111. //LHP MS

**Indigenous knowledge recovery is an anticolonial project.**' It is a project that gains its momentum from the anguish of the loss of what was and the determined hope for what will be. It springs from the disaster resulting from the centuries of colonialism's efforts to methodically our ways of seeing, being, and interacting with the world. **At the dawn of the twenty-first century the recovery of Indigenous knowledge is a conscious and systematic effort to revalue that which has been denigrated and revive that which has been destroyed.** It is about regaining of being that allowed our peoples to live a spiritually balanced, sustainable existence within our ancient homelands for thousands of years. **In privileging writings about current work in Indigenous recovery, we are challenging the powerful institutions of colonization that have routinely dismissed alternative knowledges and ways as irrelevant to the modern world. Because Indigenous Peoples and other advocates of Indigenous knowledge have typically been denied the academic power structures that legitimize such knowledge, special issue of American Indian Quarterly offers us a rare scholarly opportunity to validate it. In carving a new space for discussion about Indigneous knowledge, we are testifying to its importance. This special issue provides a forum for sharing the ways in which researchers and writers are engaging Indigenous knowledge in the academy and in communities, both on individual and collective levels**. **Rather than engaging issue simply as an intellectual exploit, our goal is to discuss knowledge in the broader context of Indigenous empowerment. All the contributors to this collection would agree that Indigenous knowledge is meaningless and actually harmful if its holders and practitioners are not simultaneously empowered and supported in our efforts to not only survive but also thrive.** In addition to our physical subjugation, the process of colonization re- quired the complete subjugation of our minds and spirits so that our lands and resources could be robbed from underneath our bodies. Ngugi wa Thiong'o describes the largest weapon of imperialism as the "cultural bomb": "The effect of a cultural bomb is to annihilate a people's belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity, in their capacities and ultimately in themselves." 2 Indeed, through the combined efforts of government institutions and Christian workers, Indigenous Peoples in the United States and Canada faced severe persecution for practicing our spirituality, for speaking our languages, and for attempting to live the way our ancestors before us had lived. The federal boarding and residential schools continued this tradi- tion, aiming their most concerted and brutal assaults on our most vul- nerable and precious populations-the children.3 While the devastation wrought from these assaults was not totally complete, it has been thor- ough enough to severely disrupt our ways of living and to cause us to question the usefulness and importance of the ways of life given to us. The colonizers taught us that the conquest and "civilizing" of our people was inevitable; that we, too, must give way to "progress." It was hammered into our heads that our Indigenous cultural traditions were inferior to those of Euroamericans and Euro-Canadians, that there was nothing of value in our old ways, and that those ways were incompatible with modernity and civilization. In order for the colonizers to complete their colonizing mission, they were required to make not only them- selves believe these ideas, but us as well. In one way they were correct; within the confines of colonialism our ways were irrelevant and incompatible. Indigenous traditions are of little value in a world based on the oppression of whole nations of people and the destructive exploitation of natural resources. Our values and lifeways are inconsistent with the materialism and militarism characteristic of to- day's world powers. In this world that colonialism has created, there is no place for Indigenous knowledge. **When Indigenous Peoples were taught the worthlessness of our traditions and knowledge, it was designed to perpetuate the colonial machine**. If Indigenous cultural traditions had been deemed to be on equal ground with the colonizer's traditions, colo- nialist practices would have been impossible to rationally sustain. **Unless they were willing to complete a project of complete extermination, their sense of peace required the muting of Indigenous voices, the blinding of Indigenous worldviews, and the repression of Indigenous resistance. To meet their aims, our capacity for producing knowledge had to be diminished into nonexistence.** Within a broader context we now understand that these ideas promoted in the Western world are just one form of knowledge out of many. It was not inevitable that Western knowledge would conquer Indigenous knowledge, or that our ways of life had to end. At any point in history we could have worked jointly toward conditions that would facilitate the re- turn of Indigenous ways of being while appreciating the knowledge that supported those ways. Even now this is not an impossible task. **The same human beings who created the conditions of this world also have the capacity to change them. In telling us we must change and adapt, they really meant that the old ways must end because they were unwilling to change their colonizing ways**. **They were unwilling to end their occupation of our homelands; they were unwilling to foster the restoration of the plants and animals indigenous to our homelands; they were unwilling to discontinue their exploitation and destruction of all that we cherished; and they were unwilling to let us retain the knowledge of alternative ways of being**. Because the colonizers wanted to continue colonizing, we had to change and our way of life had to be destroyed. So goes the nasty business of empire building.The legacy of this colonizing objective is frequently parroted by Indigenous Peoples, even by some academics, who have obediently learned to restrict their own vision according to the parameters set for us by our colonizers.4 **Fortunately there have always been those among us who understood the political motivations behind their thinking, who held fast to the original directions given specifically to our ancestors, and who resisted colonization by carrying that knowledge into the present.** There is a growing number of Indigenous people and non-Indigenous allies who have seen the fallacy of Euroamerican and Euro-Canadian self- purported superiority and who have complete faith in the ways of life that sustained us for thousands of years. In fact, many of us even go so far as to suggest that eventually these ways may resolve some of the global crises facing all populations today.

## On case

**Innovation is back up – COVID and empirics prove – The Economist 20**

“Drug Innovation Is Back in Fashion.” The Economist, The Economist Newspaper, 23 May 2020, [www.economist.com/leaders/2020/05/23/drug-innovation-is-back-in-fashion](http://www.economist.com/leaders/2020/05/23/drug-innovation-is-back-in-fashion). // LHP

The **pandemic has reminded** the **world of the industry’s** strengths—its **capacity to innovate** and provide drugs on a vast scale. Many of the **big firms**, such as Johnson & Johnson and Sanofi, are **working on covid-**19 **vaccines and therapies**. **Scores of smaller companies are at work**, too. On May 18th **Moderna**, an American biotech firm, said that its much-anticipated vaccine has shown positive early results (although some analysts questioned the validity of its tests). **AstraZeneca**, a big British firm that invests heavily in research and development (r&d), is working on a vaccine with scientists at Oxford University, helped by $1bn of new funding from America’s government. **Even before the virus, the industry had started to invest more heavily**. In the **most recent quarter America’s 30 biggest firms boosted their r&d by a median of 6% year on year**. Now **medical innovation is back in fashion.**