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## Biopiracy, Witchery, and the Fables of Ecoliberalism

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Jack Kloppenburg, Jr

At first they all laughed  
but this witch said

*Okay*

*go ahead*

*laugh if you want to*

*but as I tell the story*

*it will begin to happen.*

*Set in motion now*

*set in motion by our witchery*

*to work for us*

(Leslie Marmon Silko, *Ceremony*, 1977)

The power to narrate, or to block other narratives from forming and emerging, is very important to culture and imperialism, and constitutes one of the main connections between them (Edward Said, *Culture and Imperialism*, 1993)

Frequently I am humbled by the ability of poets and novelists to address with great beauty the same concerns that I try to put into words in my own work. In her novel *Ceremony*, Leslie Marmon Silko follows a young Laguna Indian veteran named Tayo as he seeks to heal the injury done to him by his participation in World War II. Silko suggests that while stories can be life affirming and healing, they can also elicit and countenance destruction. The healing stories are ceremony, the destructive stories Silko terms "witchery."

The novel unfolds around Tayo's struggle to recognize and engage the two sets of stories being told of him and his people. Although telling is itself a form of doing, the act of narration is not necessarily sufficient to achieve effect; that, after all, would be mere magic. For their potential to be realized, stories must find embodiment in the human action for which they are guides. The power in a story ultimately resides in the capacity of its form to galvanize human commitment to making the story happen.

I myself am particularly interested in the stories that surround what I regard as two of the pivotal and defining historical patterns of this century: the rapid expansion of the commodity form and the equally rapid diminution of biological diversity. Centuries from now the present era may well be remembered for the way in which social relations came to be dominated by the institution of

commodity exchange, and for the concomitant destruction of many of the species and landscapes with which we share this planet.

It cannot be very surprising, given that the world is losing biological diversity at an unprecedented rate, that there is the persistence of warfare, the continuing assault on indigenous peoples, and the reappearance of 19th century labor conditions in the emergent global village. If we fail to care for each other, should we find it remarkable if we are unable to treat our fellow species with care or respect? If we value each other principally through the instrumentality of the market, isn't it even easier to apply the principles of GATT, NAFTA and the WTO to other species?

Among some of the most influential and powerful segments of the conservation and environmental communities, there is growing acceptance of a story line in which preservation of threatened organisms and the ecosystems in which they live is justified in terms of their economic utility rather than on the basis of the integrity of the beings and places themselves. Their real or potential market value becomes not only the justification but also the means for their preservation: they must be sold so that they may be saved. This willingness to sell has emerged alongside an increased willingness to pay on the part of governments and corporations of the industrialized North. Advances in biotechnology and genetic engineering have given rise to a new bioinformatics industry the raw material of which is the DNA contained in every living creature, "the oil of the information age," as the World Resources Institute has suggested.

The promise of the commercial potential of unique biological information has given rise to a pulse of "bioprospecting" as government, university, and corporate scientists scour the earth and seas for plant, animal, microbial, and even human genetic material that might have biochemical properties of use in agricultural, industrial, or medical applications. The blunt, commercial terms in which the prominent tropical ecologist Daniel Janzen frames the problem of conservation in Costa Rica bespeaks the degree to which the commodification of biodiversity is being narrated now as both necessary and proper:

Now, how do you get hard dollars out of biodiversity information? ... I look at my assets and I've got 12,000 square kilometers of greenhouses [Costa Rican national parks] with a half a million species and organisms and I know what they are and where they are, and when I sit down at the bargaining table with some company they are going to pay me for those assets ... I give you something, you give me something, and we both come out with a happy business relationship.

If industry is willing to pay and biologists are willing to sell, it is not at all clear that biologists have the right to sell, even if they are in a position to do so. Like oil, biodiversity is unevenly distributed throughout the world. Not only is most bioprospecting oriented to the geopolitical South, it is focused on the lands occupied by farmers and indigenous peoples who have produced and reproduced and maintained the biotic resources with which they are surrounded, and who can themselves be targets of the bioprospectors for what they carry in their heads as well as what they carry in their genes.

How is it then, that Janzen, a citizen of the United States and a professor at the University of Pennsylvania, can speak so glibly of Costa Rica's national parks as "my assets," as commodities he hopes to turn into "hard dollars" in a "happy

business relationship?" As bioprospecting activities proliferate, conservationists and biologists from the North increasingly find themselves in a position to broker exchanges between corporations seeking biological resources and the nations, communities, farmers, and indigenous peoples who can supply them. Even permitting Janzen some rhetorical latitude in speaking about a landscape for which he has deep affection and with which he is closely identified professionally, it is troubling that a discourse redolent of an old imperialism comes as easily to him as the language of the market.

Maori activist Aroha Te Pareake Mead is troubled by the kind of ecoliberal salesmanship that Janzen's statement represents, and she unambiguously regards it as a "second wave of colonization" which

sets its sights on misappropriating what little remains after the first wave ... No matter how one looks at it, the result is the same: outsiders forcing the concepts of commodification of resources and acquiring ownership of the ancestors' gifts—lands, resources and knowledge.

The terms "bioprospecting"—or, alternatively and more accurately, "biopiracy"—are but the contemporary naming of the current manifestation of an activity with deep historical roots. Crop genetic resources and medicinal plants have long been freely taken from peasant farmers and indigenous peoples either forcibly or, more recently, with the justification that such materials are the "common heritage of mankind." With the emergence of a market structure for the appropriation of biological information in its wonderfully numerous and various incarnations, farmers and indigenous peoples are legitimately interested in how they too might benefit from these transactions since, after all, they are the suppliers and stewards of the materials being traded.

Mead raises cautions about how unequal social and economic power will affect the content and outcome of such exchanges. Can just terms of participation, based on informed consent, be constituted in a way that respects the solidarities extant in the social organization of whole communities or peoples? Mead also raises a much more fundamental epistemological issue: can those things that are regarded as "the ancestors' gifts" even become commodities without damage to the peoples who have received those gifts, or to the gifts themselves?

There are no simple or universally applicable answers to such questions. What is important to understand is that despite its ubiquity and visibility on many of the channels to which the powerful are tuned, the tale of the compatibility of conservation and the market is not the only one being told. Farmers, indigenous peoples, and their organizations are also telling a wide variety of their own stories about what they believe to be appropriate relationships between people, and between people and the non-human world. So, too, are a wide variety of social and environmental advocacy groups in the North as well as the South giving voice to narratives that critically address not just the terms of exchange characteristic of bioprospecting, but also the desirability of such exchanges insofar as they are based on the commodity form. These stories are more than merely oppositional and more than merely rhetorical, for in the telling they actively seek to construct concrete alternatives to the rationales and institutions,

laws and organizations, motivations, practices and affections that are different from those which Janzen implicitly assumes—correctly, I fear—to govern just now.

Biopiracy—or genetic imperialism—has as extensive a history as its more familiar political counterpart. The companies and countries of the North have already realized enormous benefits from their access to genetic materials appropriated without payment from farmers and indigenous peoples with the justification that such materials were the “common heritage of mankind.” Given the scientific and commercial excitement over biotechnology that emerged in the 1980s and has continued to the present, that fiction proved impossible to maintain. With biotechnology companies selling many millions of dollars worth of stock on the strength of their manipulation and ownership of patented genes, the states, bureaucrats, scientists, farmers and indigenous peoples of the South couldn’t help but notice that genetic resources that left their hands and lands as free goods were subsequently entering the market and producing income for someone else. The struggles of such groups to regulate collection or to capture some of the benefit stream from the commercial development of biotic materials—the so-called “seed wars”—have been a constant feature of the global political economy for the past two decades.

With common heritage no longer providing a legitimate framework for the collection and exchange of genetic resources, a process of “ecoliberalization” is under way in which conventional market mechanisms are being applied to the acquisition of genetic material. What distinguishes the present moment of appropriation from previous simple theft is that companies and academics are now willing to pay for genetic resources, at least in principle.

As a result of the recent intensification of bioprospecting, a wide variety of arrangements for the acquisition of biochemical and genetic materials from farmers and indigenous peoples have been concluded. These range from detailed and highly legalistic models typical of Western patent law to frameworks that are more like a treaty than a contract. The parties to the agreements on the suppliers’ side may be individual shamans, communities, peoples, or nations. The parties on the receiving end may be government agencies, companies, or individual scientists. Mediating the exchange are often non-governmental organizations (NGOs) and activist/advocacy groups. Whatever their form, all such agreements purport to manage the exchange of genetic resources on a legitimate, equitable, and compensatory basis.

Certainly the obstacles to be overcome in crafting such agreements are substantial. There are profound technical difficulties associated with establishing a price for genetic materials. Any agreement is subject to abuse, especially when an indigenous or farmer partner has little experience with legalisms and when substantial commercial as well as academic applications of knowledge are a real possibility. Moreover, indigenous and peasant communities are rarely the homogeneous, solidary, stable entities that some analysts imagine, and different factions may have very different positions on the propriety or conditions of any particular bioprospecting agreement. Frequently, it is uncertain that farmers and indigenous peoples can even legally establish ownership of genetic materials given a hostile state apparatus and a nested set of national and international legal

institutions which define what property is and, in the Convention on Biological Diversity, explicitly affirm the "sovereign right of nations" (i.e. states) over biological resources.

Beyond such practical considerations is the more fundamental question of the compatibility of Western property and market institutions with peasant and indigenous cosmologies and cultures. While indigenous peoples may in principle be willing to share their knowledge with others in return for some reciprocal flow of benefit, they often find that the mechanisms of intellectual property law by which they could do so are alien to their understanding and offensive to their ethical standards. Over the last two decades, corporate interests have worked very hard indeed to put in place a global legal framework that is designed to allow anything and everything to be privately and individually owned and therefore privately and individually sold. The existing complex of intellectual property rights law is wholly an artifact of capitalism and is ill-suited to the collective production characteristic of indigenous knowledge.

The extension of commodification and the intensification of market relations accompanying bioprospecting are certainly antagonistic toward social relations founded on collective responsibility and communal or community ownership. Peoples and communities who cooperate with the bioprospectors may find themselves drawn inexorably into the web of values, ethics, and activities characteristic of contemporary capitalism.

The farmers and indigenous peoples who are being targeted by the bioprospectors seldom have experience with the kind of transactions being proposed. Nor do they typically have very extensive knowledge of what the bioprospectors will do with the information and organisms they collect, or of the legal, scientific and commercial frameworks into which they are being inserted. Absent of such understanding, it is difficult to see how farmers and indigenous peoples can provide informed consent to bioprospecting activities, and it must be difficult for them to construct exchange agreements that are adequately sensitive to their own interests.

I would now like to make some of my own motivations and intentions clearer. As is surely apparent, I oppose the tendency to universal commodification and believe it is necessary to resist the corporate interests that lend it much of its motive force. In March 1995, the U.S. National Institutes of Health received a patent on an unmodified human cell line derived from blood drawn from a woman of the Hagahai people of Papua New Guinea. Expressions of outrage from indigenous peoples' organizations and other activist groups resulted in the withdrawal of the patent.

This victory, however, cannot be regarded as a definitive barrier to those who have for decades been working long and hard to establish the social, commercial, and legal conditions in which the cells of the Hagahai are appropriable, patentable, and saleable. Those same interests are also working long and hard to persuade us that the "end of history" (in Francis Fukuyama's brazen phrasing) is already here and that capitalism is the only social formation humans will ever again experience.

They might be right, though I don't think so, but much as I might wish it, I cannot now see any early transition to some qualitatively different form of social

organization, whatever it might be. Capitalism and the market are probably here to stay for some time. The immediately relevant question is what particular forms capitalism and its market can be made to assume. Though I believe their universal extension to be destructive of human and natural harmony, I do not regard all markets to be necessarily pernicious. I argue for their regulation, not for their elimination. I do hope that in resisting its elaboration and restraining its damaging expressions, social arrangements and institutions may be developed that provide the discursive and material vocabulary for the realization of a positive, systemic alternative to capitalism. My imagined future social formation is one in which all people, the beings with which we share this earth, and even landscapes, actively participate in the decisions that affect their joint futures.

Although the lands and bodies of peasant farmers and indigenous peoples are the principal targets of the biopirates, I want now to address my own people: the scientists, the bureaucrats, the academics, the executives, and the privileged consumers of the North. I would ask us to try to see ourselves more clearly, and to open ourselves to the possibility of heeding voices other than the ones we have been accustomed to hearing, and to attending to stories other than the ones we have been telling ourselves. For far too long, we have spoken for and on behalf of and about and to farmers and indigenous peoples. Indigenous peoples in particular, in my experience, do not accept the categories that analysts of right or left have fashioned to explain and categorize them. Continuously forced to accommodate to the demands of others, should they not now have the opportunity to choose their own paths? Those paths may or may not include the marketing of biodiversity in some form; but in either case it is indigenous peoples who ought to make the choices and those choices ought to be made on their terms, not ours, and certainly not mine.

The Huambisa of Peru are not my people. I may not like it much, but those who run Monsanto and Washington University and the National Institutes of Health and the National Science Foundation and the Agency for International Development are my people. And if Monsanto and Washington University and the National Institutes of Health and the National Science Foundation and the Agency for International Development want the Huambisa to enter into a bioprospecting agreement with them (and they do), and if I think the deal is unjust and destructive (and I do), my primary task is to oppose the actions of my own people, not those of the Huambisa.

While my primary responsibility is to respond to and shape the conduct of my own people, I also see that I have a responsibility to let farmers and indigenous peoples know what my views of the consequences of interaction with us may be. Blessed as we are with access to information, those of us in academic and advocacy positions are especially well situated to offer perspectives that indigenous peoples and communities of farmers might otherwise not have. Our task is to tell them clearly and honestly what we see, without assuming that our understanding is either authoritative or complete. The challenge is to supply information to indigenous peoples and communities of farmers in such a way that the implications of the choices they might make are illuminated but not determined.

In any case, we have our own choices to make. While bioprospecting is being

most extensively pursued on the lands and among the peoples of the South, it is also taking place in Yellowstone National Park and in the operating rooms of Los Angeles hospitals. The cells of Alaskan resident John Moore were patented several years before the Hagahai issue arose, and the University of California—Los Angeles has established in court its ownership of the eponymous “Mo” cell-line which brought the institution hundreds of thousands of dollars in research funds from biotechnology companies interested in its commercial potential.

If they can do it in California, they will want to do it in Papua New Guinea, and that is exactly what the WTO and its global rules on property and trade are designed to foster. Understanding the nature of bioprospecting for medicinal plants among Peru’s Huambisa can usefully illuminate the un- or inadequately recompensed appropriation—piracy—of diverse types of assets. The piracy to which the Hagahai are being subjected in Papua New Guinea is the same process which is being applied in the acquisition of placentas from women/newborns in U.S. delivery rooms, the procurement of band-width from the publicly held electromagnetic spectrum, and the extraction of minerals and microorganisms and timber from the national lands of U.S. citizens as well as the territory of the Korowai people of Indonesia.

In broadest terms, then, what I am concerned with is the historical process of commodification and the witchery embodied in the stories that are told to justify the process. Four years before the Hagahai patent issued, the journal *Science* had run an article describing a proposed “genetic survey of vanishing peoples.” The story was illustrated with two photographs, one of an Arewete Indian woman holding a baby, the other of a man and woman from the Central African Republic. The photographs were captioned as follows:

**Vanishing resource.** Geneticists want to collect DNA from such groups as the Arewete. Just 130 members of this tribe remain on the middle Xingu River in Brazil.  
**African Pygmies.** Cells from the two Pygmy populations in the Central African Republic and Zaire have already been preserved for future study.

I have no hesitation in labeling the stories these pictures tell as witchery. Our world is coming increasingly to be dominated by corporate interests absolutely committed to the extension of the market as the arbiter of value and as the governing form of social organization, and cynically willing to mask their own machinations as natural and ineluctable. The predatory cultural dimensions of Western imperialism, far from having disappeared, continue to countenance processes of appropriation in new areas and domains. In the pursuit of its own narrow objectives, a socially naive and self-absorbed scientific community facilitates progressive commodification by continuously opening up new areas of landscape and knowledge for exploitation. The corporate, cultural, and scientific versions of the modernist fable share a common feature: they assign agency almost exclusively to their own narrators and are either unwilling or unable to recognize the interests and voices of those whose lives and societies they forcibly engage.

What kind of logic is it that treats a woman and her child as a “vanishing resource?” What kind of logic is it that makes the immortalization of peoples’ cell

lines more important than the survival of the people themselves? It is the logic of the commodity form. To follow that logic into yet another century and to allow it to be the dominant story that shapes our relations with each other and with the biosphere can only bring us closer to the eventuality that the critic Raymond Williams most feared:

the final victory of a mode of thought which seems to me the ultimate product of capitalist society. Whatever its political label it is a mode of thought which really has made relations between men into relations between things or relations between concepts.

May such witchery not triumph.

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