

Comparative Perspectives Symposium: Bioprospecting/ Biopiracy

Land, Bodies, and Knowledge: Biocolonialism of Plants, Indigenous Peoples, Women, and People with Disabilities

In the worlds of exploration and mining, prospectors make claims on parcels of land, looking to make a profit in the future; bioprospectors are making claims on biological resources with a view to making a profit (Hawthorne 2002, 266). From a feminist perspective, there are several ways to understand resources. *Resources*, in an unadorned way, can mean simply the plants, animals, and products of the land. However, this does not adequately cover what bioprospectors are claiming, since the claim is made as if we—all people—have equal and open access to all resources.

The claims on biological resources are made on two sources: land that is inhabited by indigenous and traditional peoples, as well as the resources of rivers and seas; and bodies of women, indigenous and genetically isolated peoples, and people with disabilities and chronic illnesses. I want to look at these sources separately, although the issues involved are analogous. In the same way that it can be argued that the bodies of the poor, people of color, and women have been colonized in the preceding centuries along with the colonization of land, so too it can be argued with bioprospecting. The difference is that this latest permutation of colonization is occurring in a knowledge-based economy. Privatization is achieved through patents, the exploitation of body parts such as women's eggs or the cell lines of isolated populations, and the appropriation of knowledge that has been handed down over generations, very frequently among women. The important issue here for feminists is the recognition of the connection between women's bodies and the land as expressed by indigenous women in Australia (Bell 1998). Both the land and women's bodies have suffered colonialist intrusions, and both colonialist and imperial agendas have capitalized on exploiting women's bodies and the land (Hawthorne 2002, 162–205).

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What is biopiracy?

Corporations argue that bioprospecting is a beneficial event for indigenous communities since it can generate money for social and other services in poverty-stricken communities. It is, however, a two-edged sword because it involves making public an earned system of knowledge and entering into the contested knowledge systems of colonialist corporations whose main concern is to privatize knowledge as patents on life forms. Although there are many who claim that benefits accrue to indigenous communities in the form of royalties, I argue that communities are much more likely to lose not only access to their traditional knowledge but also control over how that knowledge is used, just as when the industrial revolution occurred the value of labor was alienated and the profits passed into the hands of the owners. It was precisely that alienation and loss that prompted Vandana Shiva and others to challenge W. R. Grace's patent on the neem tree, *Azadirichta indica*.¹

Biopiracy of earth-based resources

Earth-based resources used by indigenous and traditional peoples include medicinal uses for plants, fish, animals, and other resources located on lands, rivers, and seas. This knowledge comes from a long attachment to the environment and from a history of maintaining that environment over millennia—in Australia, for more than forty thousand years.

There are a number of key examples of biopiracy in the literature. The case against W. R. Grace's patent on the neem tree is one of the most cited. But the neem was backed by written Sanskrit sources. Most indigenous communities rely on oral not written histories. This is the case in Australia. As one of the megadiverse regions of the world, Australia is home to numerous flora and fauna that corporate scientists are exploring. One example is the Western Australia smokebush, which has

¹ The neem tree, *Azadirichta indica*, grows in Asia and Africa. In India it has been used for millennia as an insect repellent, spermicide, and medicine for skin diseases, sores, and rheumatism. It is found as an ingredient in toothpastes and soaps and can be used to prevent fungal growth such as rust and mildew. Long called the blessed tree or the free tree, it was not perceived as particularly important in the eyes of those from the West until the 1970s, when some of its traditional uses began to be taken seriously. W. R. Grace, a U.S. company, isolated the active ingredient and took out a patent on the neem, claiming that patent on the basis of novelty. In 2001, this patent was revoked on the grounds that it constituted, as Indian antiglobalization activist Shiva points out, "piracy of existing knowledge systems and lacked novelty and inventiveness" (2000, 42). This is a positive move with regard to the recognition of traditional knowledge.

been used for medicinal purposes by Aboriginal people and whose active ingredient, concurvine, is now being examined for use against HIV (Christie 2001). This may appear to be a benign, indeed very positive, development. But as Henrietta Fourmile (1996) from the Gimoy Clan of the Yidindyi Nation in Australia points out, indigenous people were not consulted, and their knowledge is being stolen. The peoples of Africa are facing similar challenges. The San people of the Kalahari challenged British and U.S. drug companies that took out a patent on an appetite-suppressing ingredient of the hoodia plant.² As a result of the court challenge, the San will now receive royalties in a “benefit-sharing agreement” (Barnett 2002, 3). A later paragraph in the news item suggests something more sinister. “The San are likely to be involved in farming and cultivating hoodia, and to be *offered scholarships to study so that their ancient botanical knowledge may lead to other products*” (Barnett 2002, 3; emphasis added). In 1977, Ghanaian novelist Ama Ata Aidoo warned that scholarships are a “merciless” way of finding out about the mind of the colonized (1977, 86). What better way in a knowledge economy is there to mine for information that can later be privatized and patented? Furthermore, because royalties are distributed unevenly in communities, conflicts arise because some groups and families receive more. As I argued earlier, the commodification of community knowledge disrupts the whole society.

Biopiracy and value

The concept of value is an interesting one in this debate. It resembles much of the debate that has centered on the value of women’s work. Michael Dove, in his study of rainforest management in Kalimantan, Indonesia, argues that whatever of value is found or developed by indigenous forest peoples—particular tree species, mineral deposits, butterflies, and medicines—will never earn for the forest people what it would earn in the open market. Instead, centralized power appropriates the resource, sometimes for allegedly public interest, and then pockets the profits (1993, 20). A disjunction also occurs between what is known to be valued by indigenous forest peoples and what governments and corporate interests value. Dove argues that UN-sponsored development projects define what they will “allow the forest peoples to keep . . . butterfly farms, crocodile farms, fish farms and [the activity of] medicinal plant collection” (1993,

² In recent weeks, I have seen junk e-mails advertising hoodia.

21).³ This list, he suggests, is not for the peoples' empowerment "but for their *impoverishment*" (Dove 1993, 21). For, if empowerment were the goal, the list would include trees for timber, hardwoods, gems, and the biodiverse resources that the rainforest holds, and the forest people would be in charge of forest management. His concern is not just for what has been taken away from forests but for what has been "taken away from forest peoples" (Dove 1993, 22).⁴ Dove's observation applies to resources developed by women, often developed because there is a domestic or local need for the product or for the ways of spreading knowledge. Jane Mogina (1996) speaks of the ways in which older women in Papua New Guinea use the forest not only as a way of passing on knowledge about medicinal contraceptive plants but also as a safe place to pass on to young women information about sex. The plundering of forest resources results in the plundering of women's knowledge systems and bodies.

Biopiracy of body-based resources

Indigenous bodies

Body-based resources include the results of research carried out under the auspices of the Human Genome Diversity Project (HGDP), a project in which the bodies of indigenous peoples—among them women—have been used to colonize DNA from human bodies and make a profit. The much touted Human Genome Project (HGP) and its sister the HGDP, which indigenous activists call the Vampire Project, have come under severe criticism from feminists, indigenous peoples, and people with disabilities. Both projects aim to collect genetic samples from populations, in much the same way that early colonial prospectors collected botanical, animal, and human samples for scientific cataloging. Such prospecting would not have been possible without a particular worldview that allowed easy transfer of property into colonial hands and the development of

³ The medicinal plant collection will remain in the hands of forest peoples only so long as no cure for cancer, AIDS, or treatment for the symptoms of menopause is found in their region. On June 7, 2001, I visited the World Bank in Washington, DC. In the lobby was a huge display titled "Biodiversity in the World Bank's Work." The World Bank is funding indigenous peoples, such as those in Kalimantan, to preserve their heritage because it is worth billions of dollars. It is clear, however, that the forest peoples, the desert peoples, and the fisher peoples are very unlikely to end up billions of dollars richer.

⁴ The example of the neem tree bears out Dove's argument since until the 1970s the neem tree was not perceived by the West as anything other than a lowly tree. This is analogous to the ways in which women's knowledge is treated, i.e., it is irrelevant until someone decides that there is a buck to be made.

patents (Hawthorne 2002, 314–22). The HGP and HGDP have created a new kind of colonialism: biocolonialism. No longer is the integrity of the human body assured, and the products of botanical and zoological colonization are also transferred into private hands.⁵

Colonial theft was extended to human anatomy. When Australia was colonized, the body parts and skulls of Aboriginal people were collected by eminent nineteenth-century scientists who saw nothing wrong with the practice.⁶ Today the practice continues, albeit on a level that cannot be perceived by unassisted human sight. Molecular colonization continues the practice of colonizing human bodies. In the case of the Guaymi, an indigenous people from Panama, a twenty-six-year-old woman had the cells from her cheeks taken through the genetic sampling program of the HGDP. These cells were then appropriated, and an application for a patent was made. The Guaymi carry a virus that, because it stimulates the production of antibodies, might prove commercially profitable in treating leukemia and AIDS. The appropriation was followed by privatization of the woman's body parts for the benefit of a large corporation. The profit generated was not returned to those who had provided the original resources but instead went to foreign-owned companies. This process is not dissimilar from the concept of *terra nullius*, enshrined in Australian law until 1992.⁷ The knowledge system and the body are considered vacant and therefore open to exploitation by business.⁸

Women's bodies

The mining of women's body parts is routine and is especially widespread among those engaged in reproductive technologies and stem-cell and cloning research using the by-products of abortions. Korean feminist Joo-

⁵ See Horvitz 1996; Awang 2000; Tauli-Corpuz 2001; Hawthorne 2002.

⁶ The result was that the bodies were moved to the mother country, England, from which they now need to be repatriated. Indigenous people call it bringing the old people home. They are not considered skeletal remains but rather are considered part of the community that needs to be properly looked after and returned to the land.

⁷ *Terra nullius* (Latin) means literally "empty land." In the minds of the colonizers, because they could see no formal structure for ownership and improvement of the land, they could not see the land as inhabited. People in Africa and Australia were epistemologically disappeared. *Terra nullius* represents a legal and ontological perspective that sees earth as empty, unused wasteland, as a resource to be plundered and made profitable.

⁸ Billions of dollars are spent for such research on people who are considered under threat of extinction. It does not seem to occur to the scientists that they themselves are part of the problem in preferring to gather samples rather than respect the dignity and culture of these people. But to withdraw and not impose their agenda would mean no potential profits.

hyun Cho (2005) has argued that women's bodies have been used as a resource for Korea's economic development. In the move to produce customized stem-cell lines, scientists require countless women to make enough embryos for their experiments. Furthermore, she argues, nationalism and science are entwined as a dual justification for the use of women as resources.⁹ Feminist critics of reproductive technology, in particular those associated with the Feminist International Network of Resistance to Reproductive and Genetic Engineering (FINRRAGE), have written extensively about the exploitation of women's bodies as "mother machine" (Corea 1985), "test-tube women" (Arditti, Klein, and Minden 1984), and "living laboratories" (Rowland 1993). These latest assaults are an extension of the same philosophy. Women's bodies are resources and a major site of colonization and profit making (Klein 2001). Like the land of indigenous peoples under *terra nullius*, women's bodies are viewed as inert, passive, and empty, that is, ripe for exploitation and appropriation.

A further issue is that women's traditional knowledge—from that of Russian peasants to Bangladeshi farmers—and their collections of seeds are vulnerable to the demands of biocolonialism. In India and South Africa, traditional healers are being criminalized for their continuing use of healing methods that women have passed down through the generations (Hawthorne 2005). In South Africa, the *muti* industry is a sector in which "80 per cent of the *muti* sellers in Durban and Johannesburg are women who collect plants within a 5 to 10 km radius of their rural homes" (Rangan 2001, 19).¹⁰ There are moves to commercialize the industry through large-scale growing of plants, including endangered species. This, as Dove argues, immediately moves the knowledge and the control out of women's hands and out of the hands of local men as well. A further issue of concern to Haripriya Rangan is that women *muti* collectors and sellers are threatened by their decreasing access to common

⁹ The so-called benefits to indigenous and traditional communities are rather like the so-called benefits to women of entering prostitution: apparent economic independence. But in both cases those groups must enter the worldview, the paradigm for the dominant culture, and adhere to its rules. This is not freedom but a new form of social abjection.

¹⁰ *Muti* is the term used in southern Africa (including South Africa, Namibia, Botswana, Zimbabwe, Mozambique, Swaziland, and Lesotho) for indigenous medicinal plants. There is a misrepresentation doing the rounds that *muti* only refers to the use of the body parts gathered from ritual child murders. This is being used to give *muti* a bad name. The benefits are to bioprospectors and pharmaceutical companies. Parts of animals are also used in *muti*, and the ecological damage resulting from this also tends to get more media exposure. Certainly *muti* is complex, but it is critical that we separate out the strands and not be induced into supporting the demands of bioprospectors.

lands. In a move that has a similar impact to that of the Enclosure Acts in Britain, in South Africa today “the rapid expansion of homesteads and fencing on common lands . . . [is] the most urgent threat to rural women and their livelihoods” (Rangan 2001, 24). Furthermore, there is more than one kind of *muti*. The *muti* practiced by “big men” involves ritual child murder (see Dow 2002), whereas the *muti* industry described above concerns women’s traditional practice. The conflation and resulting confusion means that women are being wrongly vilified and their practices made illegal.

Bodies with disabilities

Research on the bodies of people with disabilities challenges disabled people’s legitimacy as worthwhile human beings, calling attention to big science, raising questions such as the following: If a disability is genetically detectable, should the person bearing that disability be eliminated? Are people with disabilities made up only of their genes? If we were to agree that people are their genes, what of those people injured later in life or suffering from an illness such as a motor neuron disease or multiple sclerosis that only appears later in life? Indigenous peoples have resisted being reduced to their genes; people with disabilities are also resisting. As Jennifer Fitzgerald writes, “Through the geneticizing of self, the lives of those with imperfect genes become delegitimized. The imperfect thus become the primitive; become the undesirable; become the avoidable; become the unconscionable; become the illegal, and therefore, become the punishable” (1998, 11).

As attempts to biologize sexual orientation pick up pace, lesbians and people of nonheterosexual orientations will be subjected to the same pressures as people with disabilities are now. Within a paradigmatic heterosexual discourse, as in a dominant abledness discourse, parents do not want their children to suffer physical, psychological, or social prejudice. Under the guise of choice, the reduction of people to their genetic makeup threatens all sorts of attempts to maximize social justice.

In order to get out of this vicious cycle of failed technology followed by business opportunity, followed by yet more failed technology, we need to begin to look at the world in other ways. Elsewhere I have argued for the development of a wild politics that is based not on the drive for profit at the cost of everything else but on the inspiration of biodiversity (Hawthorne 2002). To be inspired by biodiversity and social diversity fosters the creation of knowledge systems and ecosocial systems that maximize the chances of planetary well-being.

Globalization through appropriation and privatization introduces new

layers of criminalization into our societies. The poor and the political have long been criminalized, and Australia has been built on that basis. Globalization criminalizes traditional health practitioners, who without a license to practice their traditions are in conflict with transnational pharmaceutical companies. Just as people with disabilities were criminalized under Nazism, as Fitzgerald indicates above, those with genetic disabilities—and those women harboring them by taking their pregnancies to term—will also be criminalized (Hawthorne 2005).

Bioprospecting leads to biopiracy, which in turn leads to biocolonialism. The continuing appropriation and privatization of the poor, especially of women's and indigenous people's knowledge, is a major issue of concern for feminist activists in areas as diverse as law, agriculture, science, politics, and international trade. These sites of women's and indigenous people's knowledge production and maintenance are where conflicts pertaining to globalization and social integrity intersect, where the interests of the poor conflict with the interests of privatized profit making, and where it is so easy for the poorest and most powerless to be drawn into the world of promises made by representatives of the transnational corporate sector. It is not easy to say no to royalty programs, and I am not suggesting that the poor maintain their poverty for the political gratification of people in industrialized nations. But raising the issues of appropriation, research ethics, and long-term social justice may help keep the knowledge and the control of these resources and knowledges in the hands of those who have developed, used, and maintained them for so many years.

No feminist should be under the illusion that bioprospecting will benefit women by giving women more money. Rather, it is an aggressive instrument of corporate globalizers in the rush to make even greater profits. Instead of bioprospecting opening a door to economic sustainability, it closes the door on intergenerational sustainability and cultural integrity. It is also a call for the destruction of autonomous women's cultures in which women determine treatments for ailments and illnesses. As Aidoo has said, scholarships are a very fine way of getting the colonized to spill the beans on their cultural knowledge, in this instance knowledge that will make billions of dollars in profits for transnational corporations. Do not be fooled by calls for freedom or calls for empowerment. They will not deliver.

In my experience, these issues are well understood among activist groups in South Asia and in a very few other places. In Australia there has been considerable activism around copyright and moral-rights issues of indigenous artists and some discussion of biopiracy in indigenous communities. Outside of this, including in feminist circles, the political un-

derstanding of how bioprospecting and biopiracy affect our lives is very limited. The links between indigenous and traditional peoples' intellectual property rights and those I have discussed here affecting women, lesbians, and people with disabilities have, to my knowledge, not been discussed anywhere. Challenging biopiracy provides an interesting starting point for further radical feminist theorizing in the tradition of high theory, connecting and synthesizing economic, political, cultural, religious, and ethical issues.

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