

Vandana Shiva on Sexual Economics, Biopiracy and Women's Ongoing Resistance to Colonialism

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INTRODUCTION

Vandana Shiva is a renowned ecofeminist whose contributions to both thought and action on ecological concerns are influential both in the South and the North. Shiva directs the Research Foundation for Science, Technology and Natural Resource Policy in India and is an Associate Editor of *The Ecologist*. An activist who is a physicist, ecologist and feminist, she received the Right Livelihood Award, also known as the alternative Nobel Peace Prize, in 1993. Shiva's work on ecological issues has contributed greatly to our understanding of "globalization" through a detailed analysis of gendered, racialized and classed economics. This is perhaps best exemplified by her most recent book, *Biopiracy*.

In *Biopiracy*, Shiva talks about the related fields of bio-technology and genetic engineering and how their use by the owners of transnational corporations (TNCs) is rapidly becoming one of the dominant forms of enforcing patriarchy, further entrenching white supremacy and appropriating surplus from producers. Shiva understands "biopiracy" to be the colonizing of the interior spaces of living organisms, such as those of seeds, plants and animals, including humans, as well as the theft of the socially-based knowledge that has shaped them in particular ways. Through the project of biopiracy, life forms are abstracted and redefined as simply "bundles of genes" that can be patented (and supposedly "invented") by TNCs to be sold exclusively by them in the market place. Shiva argues that this represents a profound "cosmological shift" whereby the holders of patents present themselves as the creators of the life forms they have pirated.

The result is, for example, that a Texas-based corporation, RiceTec, can claim to have "created" a certain Basmati rice, thereby superseding and appropriating the work of farmers in South Asia who have been cultivating this rice for many centuries. Biopiracy, then, is fundamentally a process of privatizing the generative capacities of life, common spaces and the knowledge produced by people over time. At the same time, it is about continuing the entire set of social relations created over the last five hundred years by a system of white, capitalist patriarchy so that women, nature and the South (where the vast majority of the diversity of life is) continues to provide the foundation for the profits of a few.

While looking at women's contemporary experiences as having a long historical trajectory, Shiva sees biopiracy as a way of extracting surplus not only from the present, but also the future as nature's and women's creative and regenerative capacities are systematically harnessed for the maximization of short-term profit making. Biopiracy, then, leads to the further destruction of the self-organizing and creative capacities of women and nature causing even higher levels of exploitation, alienation, poverty and planetary instability. Consequently, Shiva cautions us to look at the colonization of the interior spaces of life as holding dire and irreparable consequences. Shiva also discusses strategies developed by women's movements geared towards stopping biopiracy and the inequalities underlying it.

In June 1998, Vandana Shiva gave a series of lectures at a Summer Institute entitled "Women, Life and the Planet," sponsored by the Women's Studies Department at Simon Fraser University in Vancouver, British Columbia. As participants in the

Institute, we took this opportunity to ask Shiva some questions based on issues raised in her lectures. Given limitations of time and space, we asked her to expand on what we considered were some of the distinctive points of her analysis of sexual, racialized and classed economics. In so doing, our hope is to stir thought, conversation and action on an analysis of women and globalization that transcends parochial interests. Please note that the interview has been minimally edited for readability.



Vandana Shiva, 1998. Digital imaging by Greg Ehlers, SFU.

Q.1 Some feminists talk about globalization as a new phenomenon. You talk about it as a five hundred-year-old project of colonialism. You also recognize that this process has not been a static one and that major changes have taken place throughout the 1990s. In your view, what are some of the changes that signify to you that this decade represents a third wave of colonialism and how do you see it as part of, rather than distinct from, the larger colonial project?

The connection between the present globalization and the first wave of globalization which, in the Third World, was just called, "colonialism," are the ideas that Other people aren't people, their resources are up for grabs, it's an empty earth, it's *terra nullius* and that colonization is actually a liberation, because the colonizer,

somehow, by bringing the colonized into the colonial relationship lifts them out of their "non-humanness." The whole notion of the "white man's burden" fits into colonization by first and necessarily defining people out of humanity and then defining them up into a humanity as defined by the colonizer.

Something very, very similar is going on now, which is why in the Third World when this period of globalization started, we didn't just talk of it as globalization. We talked of it as recolonization. It was experienced as that. It was identifiable as that - with a few breaks, with a few changes. The commonness is, of course, the fact that all the systems and structures that societies put together in the post-colonial phase, in all its imperfections, are being systematically disbanded. You suddenly see countries starting to look the way they did before independence. The same oil companies which were thrown out are back. The same domination is there. You can literally, physically, see it. You know Gandhi's entire mobilization was started by his being thrown out of a first class train compartment in South Africa. Suddenly in India, I experience the fact that there is a business class where white men travel and there is an economy class where the rest of us are. It wasn't that way a while ago. So you can see this recolonization physically also.

The *novelty* of this colonialism, the break with the old project of globalization, is that it is creating new colonies. It is still creating colonies, but it is creating *new* colonies. I often call these new colonies the life within living systems: the interior spaces of women, animals and plants. It is presented as a "brave new breakthrough" into a genetic world. For instance, in a circular announcing a meeting organized by the department of Industry Canada with Monsanto (one of the world's largest bio-technology corporations) this last June, they used the word "genetic commerce." Now, it is not the case that they haven't traded in biological products before. The entire coffee trade, tea trade and sugar industry was a trade in these products.

I remember reading somewhere that by the end of the violence of the creation of the sugar

industry, which had become an addiction in Europe, there were some "fair traders" saying "don't eat West Indian beet sugar, because this many kilograms of sugar is equal to so many lives, because that's how many slaves had to be killed." And they'd eat East Indian sugar because it comes from farms run by people themselves. There's a wonderful historian who has called this the "big Colombian Exchange." The Colombian Exchange, according to him, was the process where valuable, biological wealth was being taken from the colonies, particularly the Americas and from the Native Americans. Corn is a primary example. I mean look at anything that is today, not just the staple in consumption, but is the basis of Empires: Levers, Lipton, look at any of them. These empires are related to a genetic commerce of another era. So there's nothing very new about it.

But now, new tools are being used to go into the spaces within. These inner spaces are then declared as private property. By having the ability to move parts of organisms around, they, the creators and owners of these new tools, are then claiming that they have *created* whole systems of life. They are, then, claiming new property. Like they claimed property in land and in so doing dispossessed the original inhabitants, they are now creating property in life. And this is the real breakthrough. There are new technological tools for colonization. There are new notions of property in areas that the last colonialism couldn't reach. Combined with all this, of course, is the even further construction of fictions that white men have created to get power away from people's understanding of their world. These fictions are used to detach themselves, to de-personify their agenda by making it more abstract.

Q.2. Over the last five hundred years, there has been a profound ontological shift in notions of values, wealth and power that has deeply affected women, nature and the "Third World." In each case, white males of the ruling class have defined themselves as creator, knower and benefactor. In your work, you have talked about how their role as exploiters has been naturalized by conceptually emptying women of their

creative capacities, emptying nature of its regenerative capacities and emptying the people of the "Third World" of their capacity to self-organize and denying their prior ties to their land. You talk about this latest wave of globalization as representing a further, equally profound, cosmological shift. What is this shift and how is it affecting the daily lived experiences of women?

The present shift is redefining living systems, particularly women, plants, animals, microbes and their regenerative capacities, as empty of any regeneration. That capacity to regenerate is then relocated in the engineering mind, in the engineering man where it is treated as a product of that mind, which is outside of the actual regeneration process. As a result of that emptying out of the regenerative and creative capacity of plants, animals and women, you get this notion of creation as something you do to systems from the outside. This is a repeat of the way it was first constructed within Christianity where a male God created creation from the outside. This was/is very different from most other cosmologies where creation creates *herself* - and it is always as a "herself." Yet, now they don't even need a God in male image. Now, it is the males of this planet who are basically saying they are the creators. For instance, they "created" Dolly.

You can see this in their representation of what they are doing. You can see how they are trying to shift people's minds by saying the Creator is the scientist and owner (in this case Ian Wilburt), and Dolly is what *he* created. Yet, all Wilburt did was take two cells and put an electric shock through them. That is all he did. Dolly did the rest herself. But, of course, in the way it is commonly represented, Dolly is not her own creation. However, she is a tremendous miracle of self-organization. That fact that Dolly took an alien cell and organized herself into a wool sheep is a miracle, a miracle which the 276 "sisters of Dolly," as I call them, who were mutants, could not do because there was a rejection. But they too were still self-organizing. Even if it wasn't a self-organizing that matched the agenda of

pharmaceutical companies. Now, this notion of creation is literally redefining what we are. It is a very profound ontological shift, because it is making us bundles of genes, rather than complex systems in highly intensive interaction with ourselves and with the rest of the world.

The second shift related to this ontological redefinition of us being bundles of DNA and bundles of genes is that it is doing exactly what was planned when the Rockefeller Foundation funded the writing of the *Molecular Vision of Life*. An historian of science, Lily E. Kay, traces the fact that when eugenics came into abuse, when people were actually not accepting it anymore, some funders said, "Let us find a way to work out social determinism through biology. Let us do it at a level which does not seem to be that easily connected with society. Let us find distant molecules through which we can say genders, a second sex, are predetermined, that poverty is not a class issue but is biologically predetermined, that every one of the factors that is actually a social and political process, is in your biology." Except they said that, now, it should be discussed through biology in a way that is a little more unlearnable and unteachable by ordinary people.

So, they spent fifty years creating the discourse of genetic determinism, one that was beyond the reach of the people. They spent fifty years working out how this thing called the "atom of determinism" would look and would be described. So not only are we redefined as bundles of genes, but this has intentionally been done so that the old project of biological determinism, which is nothing but a way of naturalizing political power, is being made more remote from people's view. It is therefore being made more opaque. Now you literally need to get into the stuff of genetic engineering to figure out how false the constructions are.

The other issue that is happening with this, of course, is that the functions for which we live, for which other organisms live, are being redefined as merely the functions that industry wants the living world to perform. Prior to Dolly there was a patent for "Tracy" and the patent is phrased, "a patent for mammalian bioreactors."

This patent allows the holder to use any species with mammary glands to make and manufacture chemicals of interest in their mammary glands. They have literally renamed us women as walking mammalian bioreactors! Us, sheep, cows. We are all in the same category because we are, in their eyes, merely "mammalian bioreactors." By redefining women as simply this, they have this dream vision of cloning not just the "Dollys," but cloning women and then making specialized chemicals in the milk that is produced by us.

And it looks like they are succeeding, because they've changed enough minds to make this ontological shift, so that even some women are saying, "Ah, freedom! Freedom because now we won't have to live through nine months of pregnancy. You know, we can have babies but somewhere else, in someone else's test tube, someone else's womb...." This dismemberment of a self-organized whole and putting bits and pieces together in ways that are willed by white men in power is defined as the "new creation" or the "second creation." This is not just changing our sense of ourselves, our sense of our capacities, our sense of our power, but it is also giving a whole new legitimacy for the old projects of patriarchy, white supremacy and capitalism which had started to get recognized and challenged by some in society. It is taking away our historical understanding of these processes by telling us, "No, this is new, and therefore you don't have to worry about all your political history and your historical consciousness of identifying sexism and racism and the creation of inequality as an intentional part of accumulation of capital. This is all happening naturally in a world in which we are the creators."

Q.3. You have named the process of granting patents on life through the enshrinement of Intellectual Property Rights in the World Trade Organization (WTO), for instance, as a new regime of appropriating surplus from the future. You relate this to a kind of colonialism of the future. Can you expand on this?

Well, so far, as long as property was in land and property was a result of labour - outside of

slavery where property was in the labour itself - all that capitalism could really do, the worst it could do, was to extract surpluses of the present and of the past. And there was a limit to how much capital could be accumulated in that process. This was for two reasons. First, it was an economic system which required the worker and then kept the worker at a very minimal level of survival, thereby, maximizing surplus. Therefore, it needed the worker, and it could not extract the surplus more than a certain amount because the worker had to be kept alive. Otherwise you destroyed your so-called very means of production. The capacity to patent life basically implies that today corporations can start extracting surplus from the future - the future of humanity and the future of nature.

Surplus is extracted from the future of humanity by setting it up so that the owners of transnational corporations can say, "these seeds are ours, they are our property and, therefore, we will clear the land and the cultural system that has grown around it, because we don't really need all of you hundreds of peasants." So they are literally taking away the right to survive of peasant societies, of Third World societies, and robbing them of their future by saying, "75% of you are dispensable. We don't need you." It's a slavery system that doesn't need the slave. And yet it does need new kinds of slavery. And there it is appropriating also from nature in two ways.

The first way it is appropriating from nature is by saying, "all the amazing freedom of life to regenerate prevents market expansion." And, of course, it does. If a seed gives rise to a tree on its own, capital cannot enter. So for capital to enter and accumulate the capacity of the tree to rise from a seed, this chain of creation has to be broken. This is being achieved by things like the "terminator seed" technology where after the seed is planted, there is a switching on of the genes that prevent germination. Nothing could be more dramatic than an appropriation of surplus value from the future in the today by saying, "no reproduction without my permission" - without the permission of capital in the hands of white patriarchy.

The second way in which the future is being appropriated from nature is that the

genetically engineered systems they are releasing into the world have the potential ecological impact of destroying this tree of life. Scrambling it totally.¹ And this combination of all these processes basically means that for a very short time - four or five years - there will be huge capital accumulation. Meantime, the farmers will be rendered absolutely destitute, consumers will be rendered totally powerless and we will have ecological havoc that is much worse than we have known.

We are playing with a genetic bomb, except that people, because they can't see through all these links, don't see it with the same kind of anxiety as they do with the nuclear bomb. But the genetic bomb is worse because after nuclear bombs explode they have radiation effects, but the radiation doesn't keep creating its own explosions. In living systems, though, the genetic bomb is a permanent, irretrievable, unrecallable disaster on nature. That's how this new phenomenon of capital that literally destroys the future and appropriates value from the future is realized.

Q.4. Oftentimes, people talk about this period of globalization as being defined by the expansion and greater mobility of capital. People talk about how quickly speculative finance capital can be shifted through computer networks and the new international division of labour arising from these developments. While all this is a part of what is going on, you have said that this period of globalization is the highest expression of white, capitalist patriarchy. Clearly, then, you see something more going on in this project than the search for ever greater profits. What else do you see going on?

By making it look like all that is really happening is this movement of finance capital through the new technologies, a false naturalness and inevitability is given to a project that is actually a willed project. It is a project of particular people with particular kinds of power who then execute that power in particular kinds of ways. This project of white, capitalist patriarchy is working in two or three ways.

First, it's working by constructing certain

fictions which then start to rule. For instance, the fiction that life forms are simply a bundle of genes is now dominant. Behind these fictions are the people who created them. They are still the rulers, but people do not see that. When we think of a corporation, for example, people do not realize that a corporation is not just a naturally existing structure, but a fiction that has been created by men with power. Corporations were created both as a way of getting more power and allowing those who own them to be able to escape the responsibility for wielding this power. The corporation was a fiction imaged in the likeness of white men with property. That is what a corporation is: a white man with property. Yet, because it has been abstracted from these white men with property, people do not see them as being responsible.

Another fiction that currently dominates is the idea that this period of capitalism has created enormous sums of money. This is a fiction because every society has had money. Money is not a new creation. Money existed before capitalism and before finance capitalism. But the reason it didn't get this current magical power of endless multiplication was because it was always made to do what it was meant to do - which is reflect value. Money, as pieces of paper, only signified that "I promise to give you value equivalent to this." In a way, it was just a shortcut to barter systems. It was always realized that money was just a derived symbol: it was not wealth in and of itself. Now, it is being treated as wealth in and of itself. New mechanisms of multiplying this fiction are being created. Of course, these mechanisms are under the control of white men with property; therefore, money is not multiplying for ordinary people. It is multiplying for people who are in the system and who are constantly able to utilize it.

Another dimension of this project is how notions of knowledge and value are being defined in highly racist and class terms. This project is basically saying to people, "your knowledge isn't knowledge. It is when I take your knowledge that it becomes knowledge, and so it is I who make it knowledge." Biopiracy is that kind of project. Patenting is that kind of project. You take the whole bundle of what's making globalization

happen and what's making it look as if it is a certain "brave new world" of the next millennium, and you'll find that it is really old tricks with new instruments.

At a deeper level, what is also going on - and I have learned this as a feminist who learns feminism from life and not just from books - is that very often the search for power goes beyond the need to exercise power. By this, I mean that you get crazy notions of power. The wielding of this kind of power comes from basic craziness. It comes from absolutely basic insanity. From fear. This kind of power demands from the tree that's alive, "How could you be growing without my permission? I better own it! That woman? She doesn't have my permission to do this or that. I have to discipline her!" The kind of violence and excessive power that is being exercised right now, in my view, is also coming from a very, very deep crisis that's psychological in nature. This crisis stems from the fact that white capitalist patriarchy, having spent five hundred years trying to control all life, constantly finds that this silly life keeps getting out of its control. And it panics. The responses are panic responses. And we should treat white capitalist patriarchy just like we would treat violent men. Men beating up their wives? That's how we should be treating white capitalist patriarchy!

Q.5. You talk about the personification of the market and how it is credited by some with being the creator of all wealth. Can you talk about this process of personification in relation to the dehumanization of women and destruction of ecological integrity?

You just have to pick up a paper to see that the person who is really inhabiting the planet is a "Mr. Market." This "Mr. Market's" health is reported in such detail - his jubilation, his sadness, his depression. Notice that every phrase being used for the market is a human phrase of description, of feeling. That is why I refer to this construction as a creation of a "Mr. Market." Mr. Market has to be kept healthy, right? So everything has to be changed for Mr. Market who inhabits Wall Street more than any other place in the world. If his fever

starts to rise, then you must do a new "witchcraft" and give the fever to someone else to bring down his temperature.

This rationale can be found to be working when the South East Asian crisis happened. What was done were "bail-outs." Yet, those that were bailed out were not the cultures and the people, but the banks. As a result, food in Indonesia today is four, five, six times more expensive, and already thirteen million jobs have disappeared. It is women who are taking the worst brunt of this destruction. They shoulder the entire burden, of course, because people are living in a real society where there's already an unequal distribution of labour. The ultimate burden of how you keep going in life in the context where the means of life are being taken away is placed upon women.

Q.6. As you have just discussed, women have borne the brunt of so-called "successes" in the global economy and much of the assault on women's lives has been at their ability to meet their sustenance needs. You talk about the need to strengthen the self-sustaining capacities of both women and nature as a key part of a feminist response to globalization. How is the work that you do part of this response?

All of the work I am doing is a part of this response, otherwise I'd be doing physics. In a way, the growth of "Mr. Market" is based on the shrinkage of nature and the shrinkage of the world in which women meet the needs of sustenance. The creation of "Mr. Market" doesn't get rid of women's responsibility to meet those needs in society, but they have to do it with fewer resources. We have the creation of an inverted pyramid in which nature, which is the basis of all our lives, is being depleted and converted into cash.

The systems of sustenance - and they could be water resources and forest resources in Third World societies, or the health and welfare budgets in the industrialized world - everywhere, are being trimmed and being put into the market. But it is not as if these resources simply disappear. Rather, they are being relocated to help the market expand in health care, education and in every

possible domain that has been central to both food production and to our lives. A pyramid now exists whereby a small section of the world's population who control the market are on top because they control people's capacities to labour and nature's capacity to generate life.

The work I do - on the ground, ecologically, with communities - is related to strengthening nature by rebuilding ecological processes; strengthening people's capacities to have access to the resources they need for sustenance, and shrinking the market to its rightful place. Very concretely, it means setting up seed banks so that the cycles of the seed to renew itself are not disrupted by the logic of the "terminator technology" and doing organic agriculture and sustainable farming to stop the destruction of cycles of nutrition and fertility caused by chemical toxins that are responsible for so much of the debt and so much of the dispossession of farmers around the world.

People would then be able to meet so many of their needs from their own capacities and start delinking their very survival from the market. The market could then start to play the function it's supposed to: to provide what people can't by themselves. The market could become a place for mutual, reciprocal give and take, rather than a place where white capitalist patriarchy comes and pulls everyone by the scruff of the neck and says, "I have you, you do this for me, or else...."

Q.7. In the context of strengthening people's capacities to sustain themselves, we were struck by David Ehrenfeld's concept of "forgetting" that you used in *Biopiracy*. You used it to signal a process whereby certain forms of knowledge are allowed to disappear because they do not serve commercial purposes even though they serve people's needs very well. Do you find that this is occurring in the communities you are working with?

Very much. When capitalist patriarchy defines itself as the creator, a knowledge vacuum, an epistemic vacuum, is created, which then gets filled with what is good only for the project of

capitalist patriarchy. That is what "forgetting" is about. Forgetting is about cleaning off the slate so that you can start colonizing the future by preventing people from remembering the past.

Q.8. Within the social movements in the North, be they feminist, organized labour, or environmental, there has been a consistent recreation of colonial relations with the South. You talk about this occurring in the push from some Northern-based environmental groups to identify so-called "global environmental concerns" and how this demand often becomes a sort of "green imperialism" whereby all the responsibilities for these problems are displaced from the North to the supposedly "over-populated" South. This then becomes another instance of the creation of a false "global" to conceal what you call the universalism of a particular local and parochial interest. At the same time, you talk about the need to forge links of international solidarity. How can the latter be achieved without reproducing the five hundred-year-old pattern of Northern domination?

For me, the preconditions of a genuine solidarity based on equal respect and mutual give and take requires two things. The preconditions are, first, that you have to avoid what I call "political deflection." For instance, some have said that what they really want to do is take on DuPont for the toxins they create and spread, yet, by the end of the program, First World environmentalists start to chase Third World farmers about how they, rather than Du Pont, do agriculture. This deflection becomes possible because they don't keep a clear political focus on what it is that they really wanted to do. So you have to keep in mind and constantly recognize that you cannot end up creating an Other out of those who should be your partners.

ENDNOTES

1. For example, the "terminator technology" currently owned by Monsanto, one of the world's largest bio-tech corporations, has been shown to be able to infect wild, or non-genetically engineered, crops so that they, too, no longer regenerate.

2. The "Development Decades" is the period in which corporate control was wielded through supposed "aid" projects to the "Third World." The "Green Revolution" dreamed up by chemical pesticide companies perhaps best exemplifies this.

Very intimately related to this need for international solidarity is a second precondition. Now, quite clearly the problem is created by global corporate control and the fact that corporations are acting globally. They don't just act in the South. In fact, they have acted longer in the North. For solidarity to be maintained, in my view, one very clear criteria is to do first what is do-able at home and not run away and try to solve problems elsewhere. This is for the simple reason that we are not in the kind of situation we were in. We are in a different period than the so-called "Development Decades."² In the "Development Decades," it made sense for Northern do-gooders to run to the South, because they couldn't do "development" here in the North (since it was thought that "development" could only be brought to the South since it was the South which didn't "develop" to the status of the North). But in the period of globalization where corporations are at home in every country, a democratic movement to counteract global corporate rule is being created.

Any person who really wants to do something, as an environmentalist, as a person concerned with workers' rights, she or he has enough to do at home since these corporations are dismantling the securities in every society. And if everyone was doing their thing at home and relating to people doing similar things rather than creating a vicarious project, you would avoid Green Imperialism and the Blue Imperialism of the Northern trade union movement - what they call the Blue Clauses, which is the worker or social clauses. The ultimate point is that we can't afford this imperialism and not only because it is racist. We can't afford it because, if it actually builds up, we will not have the strength to bring about the changes that are necessary.