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Food Sovereignty and the Anthropocene: Food, Women and Resistance in Vandana Shiva's Select Writings

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Abstract

The Anthropocene is generally considered a human-centric geological epoch where capitalism has altered the lives of humans and non-humans alike by changing the climate, food practices, marine ecosystem, and biodiversity. This article intends to explore the impact of patenting genetically modified production of 'seeds' in the neo-liberal economy of post-independent India and how it disrupts the culture of food in the subcontinent through the works of Vandana Shiva, focusing on her memoir *Terra Viva: My Life in a Biodiversity of Movements* (2022) and *Seed Sovereignty, Food Security: Women in the Vanguard* (2015). While acknowledging a sustainable approach through her narrative of activism and resistance, Shiva propagates the idea of archiving knowledge through food grains, i.e., women actively gather and preserve these seeds. She introduces the idea of 'seed sovereignty,' where Indigenous communities retain the power of owning, producing, and distributing food and the knowledge system around it. This article argues that employing self-sustaining methods and integrating non-anthropocentric ideas with futuristic farming practices, like planting 'heritage seeds' that can survive natural calamities, could help transcend the Anthropocene question. Since dietary consumption is the most intimate connection of the consumer with the external environment, dietary transformation at the elementary level will efficiently resist monocultures and the monopoly of rights retained by food corporations patenting genetically modified seeds. Thus, this article will look closely into the role of women in gathering, preserving, documenting, and, in turn, propagating food sovereignty by resisting corporate grab through activism.

Keywords: Indigeneity, Food sovereignty, Resistance, Anthropocene

Introduction: Indigeneity and the question of soil

In the natural world, man thrives when he works in harmony with the cycles of life and the other members of the soil-based ecosystem

to which man belongs. In the history of humanity, dread of the natural world appears to have received far too much attention, while a sense of place and belonging has received far too little attention. “Biotechnology and super genetics are now becoming the driving engine behind a more rapid phase in that power shift, one that is moving all of us farther away from the sources of our food while moving farmers into a new kind of technological-genetic dependence” (Doyle 254). Most of the time, scientists who have investigated the origins of human cognition are experts in their field and are not immersed in everyday life situations. The relationship between humans and soil in this specific context is necessary before delving into any analysis of the connections between humans and the soil they survive on and are dependent upon. The necessity might not be apparent right away. However, a moment of reflection will demonstrate that these two notions represent intricate and varied ideas, making it possible for the writer and reader to disagree. “In this new era, food will be more finely shaped at its point of origin – at the level of the seed, the gene, and the molecule” (Hyams 9). In the context of the neo-liberal economy of post-independence India, this article will examine how patenting genetically modified ‘seeds’ has affected the food culture of the subcontinent. This article closely analyses Vandana Shiva’s writings, particularly her memoir- *Terra Viva: My Life in a Biodiversity of Movements* (2022) and *Seed Sovereignty, Food Security: Women in the Vanguard* (2015). Shiva promotes the idea of archiving wisdom through food grains or seeds, where women actively harvest and save them while acknowledging a sustainable method through her narrative of activism and resistance through her writing.

The Green Revolution evolved around the idea that technology is a better alternative to nature and, as such, an approach to generating growth unrestricted by the limitations of nature. However, the belief that technology is a source of excess and nature is a source of restriction leads to the development of technologies that, through ecological degradation, introduce new scarcities into the natural world. Because of the Green Revolution’s tactics, there has been scarce genetic diversity in crops and fewer acres of accessible agricultural land, which suggests that the movement created scarcity rather than abundance at the ecological level. As most scholars have

observed, it is unjust to single out religion as the cause of intergroup conflict, as multiple economic and political variables are at play. These are not just tensions between two religious groups; they also represent a breakdown in culture and society and tensions between a dejected agricultural community and the centralising state, which sets prices and regulates inputs, financing, policy, and agriculture. These conflicts and disillusionments are rooted in the Green Revolution. The violence that exists in modern-day Punjab defies all accepted wisdom. According to the accepted norms about societal violence, “material scarcity” is the primary factor contributing to humanity’s cruelty to another. It is suggested that social groups have existed in circumstances that were inadequate to meet their fundamental requirements since pre-Neolithic times. Thus, nature has been linked to economic scarcity, which in turn has been linked to disputes over limited resources, and this, in turn, has been associated with violence.

Socio-economic factors behind the Green Revolution

As a science-based movement, the Green Revolution started as a socio-economic measure to provide for the world’s population by addressing food scarcity. Its primary focus was to build a relationship between agricultural technology and productivity in developing countries by providing food grains for the increasing population like India, Mexico, and Pakistan, where wheat is cultivated as a staple food grain. While addressing the problem of food was the primary focus, multiplying the productivity of the land with the help of science-based technology was driven by the convenience of administrative bodies and policymakers rather than by technological accuracy. The project was backed by the field research conducted by the following research institutions popularly known as the Global Two - the United Nations Development Program (UNDP) and United Nations Research Institute for Social Development (UNRISD) working between 1970-74. Their fieldwork focused on three primary tenets of technological changes in rural agrarian societies – factors that might aid or discourage the use of genetic-chemical technology, the socio-economic factors that might alter the quality of life and nutrition as a consequence of technological intervention in primarily agrarian societies and finally, measures taken by the government to mediate between the old farming practices and the new that might

potentially modify the social structure. An inventory was put together by a group of researchers, including agronomists, anthropologists, and social historians, who considered the sensitivity of local producers. However, no singular methodology was insisted upon. Simultaneously, multiple rural settlements had to be closely scrutinised, and more importantly, their relationship with the urban market hubs, focusing on priorities and disagreements, was emphasised. “These contradictory trends affecting negatively many social groups can in no way be considered to have been ‘caused’ by the new high-yielding varieties of food grains” (Pearse 140).

Proponents of the Green Revolution in India

Indian agriculture experienced a setback in the second half of the century, from World War I to the Declaration of Independence, the global recession and depression, and the nearly total shipping paralysis during World War II. Its fall was compounded by the anarchy of partition and the spread of commercial crops such as groundnuts and sugarcane, which drove food grains onto poorer areas with lower yields per acre. India was experiencing a severe food shortage as a result of the uprisings during this time.

The Western scientists who had previously been dispatched to improve Indian agriculture had discovered that the farming principles dictated to preserve and extend nature’s processes and patterns could not be further improved. Indian agriculture had been less effective when disruptions in the distribution of supplies enabled productivity, not because of outdated ideas or subpar techniques. The colonial era brought about an array of variables, including land dispossession, forest reservations, and the growth of cash crop farming, which made it difficult to obtain enough local inputs of manure and water to sustain agricultural output. The war brought about the food crisis, which was addressed through two distinct approaches. Whereas the first was indigenous or internal, the second approach was exogenous or external. Thus, as Hyam states,

The commercialisation of production and exchange relations, the growing competition for good-quality lands by entrepreneurial farms, and the increasing numbers of landless labourers and families trying to extract a living from diminishing areas of poor-quality lands all contribute to this process of decay (140).

The independence movement served as the foundation for the indigenous response. Its goals were to increase the self-sufficiency of the nation's peasants and the ecological foundation of agriculture. India's earliest agriculture minister, K M Munshi, recognised that the agricultural crisis was linked to a breakdown of nature's processes and developed a comprehensive plan based on a bottom-up, decentralised, participatory methodology for reestablishing and recovering the ecological base of agricultural productivity. Recognising the need to take into consideration the diversity of India's soils, crops, and climates, a programme for the revival of Indian cultivation was developed. Planning from the bottom up, taking into account each village and occasionally every farm, was seen to be crucial for the 'land transformation'. Restoring the natural order of nature and cooperating with its processes were seen as essential components of the indigenous agriculture programme.

Even though Indian scientists and policymakers were devising sustainable and environmentally friendly solutions to revive agriculture in their country, a different agricultural growth model was emerging among American foundations and associate organisations. This idea was based on conquering nature rather than working with it. It emphasised the growing use of credit and bought ingredients like chemical fertilisers and pesticides rather than the escalation of nature's processes. It was predicated on dependency rather than independence. Its foundation was uniformity rather than diversity. Advisors and experts from the United States traveled there to change India's agricultural research and policy from a traditional and sustainable model to an exogenous, high-input one. Naturally, they found allies among some elite segments since the novel approach suited their political interest and objectives.

The American Government, the World Bank, and the private American Foundations were the three international organisations that helped bring the American agricultural model to India. Since 1952, the Ford Foundation has worked in agricultural extension and training. Since 1953, the Rockefeller Foundation has been actively redesigning India's agricultural research system. The principal architect of the Green Revolution in India was M. S Swaminathan, who was appointed the Director of IARI in 1965 after being schooled by Norman Borlaug; he worked under various agricultural projects

initiated by the Rockefeller company in Mexico, and C. Subramaniam, who became the Agriculture Minister in 1964. Following his 1963 visit to India, he sent 400 kg of 'semidwarf' variety for testing there. The International Rice Research Institute (IRRI), which had just been established with Ford and Rockefeller, brought rice seeds in 1964. Indian Prime Minister Lal Bahadur Shastri cautioned against rushing towards a new cultivation founded on novel varieties in 1965. His untimely death in 1966 made it easier to implement the new plan. Because it was seen as a bottleneck, the Planning Commission, which authorises all significant investments in India, was likewise disregarded. "The Green Revolution was essentially a seed-fertilizer package since the new seeds were bred to be high 'consumers' of fertilizer" (Shiva 134). In the opinion of Rockefeller agricultural scientists, the Third World farmers and scientists are incapable of developing their farming practices. They thought that the American-style agriculture system held the key to increased output. Nonetheless, there was opposition to the American agricultural model's imposition in America and the Third World. Like K. M. Munshi in India, Edmundo Taboada, the chief of the Mexican department of experiment stations, believed that the development of ecologically and socially acceptable research methods could only occur with the active involvement of the peasantry.

Violence of The Green Revolution

This science-based revolution of Third World farming was the Green Revolution and its most renowned success in Punjab, India. Ironically, Punjab today is neither a prosperous nor peaceful region after 20 years of the Green Revolution. There has been a great deal of unrest and violence in this region. Punjab is no longer experiencing abundance; it is experiencing flooded deserts, pest-infested crops, unhealthy soils, and unsatisfied and indebted farmers. Punjab has inherited violence and war rather than peace. In the past six years, at least fifteen thousand people have died. In 1986, there were 598 fatalities in Punjab due to violent conflicts 1544 was the death toll in 1987, and it had increased to 3,000 by 1988. The elements of the Green Revolution's ecological and political demands as an experiment in science in development and agricultural change contributed to the disputes and violence in modern-day Punjab. The Green Revolution

was widely recognised as a significant technological and political accomplishment in human history. It was intended to bring about peace by generating abundance by overcoming the constraints and limitations of nature. The Green Revolution was presented as a political initiative to establish a stable and peaceful social structure. “After the Wars, there was cheap and abundant fertilizer in the west, and American companies were anxious to ensure higher fertilizer consumption overseas to recoup their investment” (Subramaniam 12). However, scientific research discipline was intentionally detached from governmentality and social dynamics, while aggression was a direct outcome of social manipulation. Science and economic mechanisms were disconnected when dissatisfaction and new scarcities appeared.

The traditional paradigm of science, technology, and society connects the causes of violence to politics, ethics, and the use of science and technology rather than scientific understanding. This model’s presumptive dichotomy between values and facts suggests a division between values and facts. According to this perspective, the world of facts is related to scientific knowledge, while the fundamental domain of values contains the roots of violence. Punjab’s experience with the Green Revolution exemplifies how contemporary science is produced politically and socially, strengthening its social exclusion and impeding its social appraisal. “It’s an illustration of how science limits its own shortcomings and claims credit for accomplishments. The dramatic increase in cereal production in the Green Revolution state of Punjab has been linked exclusively to the use of this seed-fertilizer package” (Munshi 145). The catastrophic narrative of Punjab illustrates the unrealistic conviction in the ability of contemporary science to manipulate society and the natural world. However, as numerous scholars and experts have suggested, it is erroneous to attribute Punjab’s crisis origins solely to religion as the disputes stem from the ecological, political, and economic effects of the Green Revolution. These are tensions between a disillusioned agriculture sector and a centralised state that controls agricultural policy, financing, credit, inputs, and commodity prices rather than just disputes between two religious communities. These disputes and disappointments are rooted in the Green Revolution.

Seed sovereignty and decolonising the seed

The eternal principles of diversification and exchange serve as the foundation for all sustainable agricultural systems, both current and future. These two ideas are connected rather than separate. The ecological capacity for reciprocity and mutuality, for cooperation and sharing, is created by diversity. Monocultures destroy diversity by replacing varied systems' decentred arrangement and self-regulation with external inputs and centralised control. The majority of Third World nations consider genetic resources as a shared legacy. Until recently, most countries' patent laws did not include plants or animals. This changed with the introduction of biotechnologies, which altered ideas about who owned what. The new biotechnologies allow us to own life. An organism is reduced to its genetic components by the possibility of gene manipulation.

Several generations of innovation are completely denigrated, granting monopoly rights on living forms to those who modify genes with cutting-edge technology, elevating their contribution above the intellectual labour of Third World farmers who have been developing plant and animal genetic resources for decades. Diversity guarantees pluralism as a system of production, in addition to conservation. It prevents biological systems from being classified as either 'primitive' or 'advanced.' Communities all over the Third World are opposing the faulty concepts in the agricultural sector by looking for seeds that farmers have been using for centuries and using them as the foundation of futuristic, self-reliant, and sustainable agriculture, much like Gandhi did when he searched for the spinning wheel to challenge the false concepts of low input and effectiveness in the manufacture of textiles. "There may be grain available but no money to buy it...Spinning is the readiest and the handiest" (Gandhi 7).

As Vandana Shiva looked closely into the threats posed by biotechnology to ecology, it led her to the path of grassroots activism. She was keen on adopting a holistic approach to help the agricultural community recover from the devastating effects of the Green Revolution. It established a non-sustainable approach to farming, pretending that genetic modification of seeds would produce more food. Unrealistic claims like monocultures producing more output in fisheries, forestry, animal husbandry, and so on had to be eradicated

to combat food scarcity and global hunger. A knowledge system based on the elemental agricultural production unit, like the seed Bija Vidyapith or the Earth University, was established in 2000. The Navdanya farm, or the seed bank, was set up where “a seed is an inspiration for renewal as well as an example of the small embodying the whole” (Shiva 14). With the sole motive of saving seeds and promoting organic farming as opposed to a system of agriculture manipulated by industrial policies, Shiva considered the knowledge of seeds as ‘intellectual property’. Hence, patenting seeds is a theft of intellectual property by monopolising its use. The Navdanya initiative started as an earth-centered and a women-centered movement that has successfully created over a hundred seed banks that freely exchange seeds and farming knowledge.

Lesser grown sustainable crops like *jhangora* (barnyard millet), *ragi* (finger millet), *marsha* (amaranth), *naurangu dal*, and *gahat dal* have been circulated in the local markets. These crops are resource-prudent, requiring less rainfall and being nutritionally dense. Millets can multiply the production of food grains, utilising a limited water supply. Shiva likes to term these food grains as the seeds of the future as they can provide the subcontinent with food security. Navdanya translates as nine seeds or the ‘new gift’ in the face of food scarcity. The nine seeds that represent nine cosmic energies are *Yava* (barley), which represents the sun; *Shamaka* (little millet) represents the moon; *Togari* (pigeon pea) stands for Mars, which regulates the nervous system; *Madga* (moong) represents Mercury which influences intelligence; *Kadale* (chickpea) stands for Jupiter; *Tandula* (rice) represents Venus; *Til* (sesame) stands for Saturn; *Maasha* (black gram) stands for Rahu and *Kulittha* (horse gram) stands for Ketu (Shiva 21). Hence protecting the resources of the land, in fighting privatisation of seeds, water and biodiversity, Shiva believes we can achieve food sovereignty through *bija swaraj* (seed freedom), *anna swaraj* (food freedom), *jal swaraj* (water freedom), *bhu swaraj* (land freedom) and *vana swaraj* (forest freedom).

Women, resistance, sustainability

Women are essential to both creativity and productivity. They are the ones in charge and managers of the health care and food security systems. A new knowledge and development system based on

violence destroys their work and nature's effort to produce nutritious food today. This system pits aggressive modern man against the web of life in an attempt to control nature and the economy and generate profit. "In each area we have come to understand that what we took to be humanly inclusive problematics, concepts, theories, objective methodologies, and transcendental truths are in fact far less than that" (Harding 30). Corporate integration is being maintained, even as it is being destroyed at the ecological level. Nature and women are being replaced by a few highly logical agribusiness companies headed by a few who maintain soil fertility, safeguard plants, control pests, and replicate genetic richness in all of its diversity. As a result, technologies that support life-sustaining eco-processes are replaced by non-sustainable technologies that interfere with them. The interference of ecology's work and female labour go hand in hand as women's physical labour is in tandem with nature to preserve seasonal and sustained flows of nutrients between crops and cattle. The ecological mechanisms of sustainable farming are destroyed when crop production and animal husbandry are separated because the organic matter base is eroded. The Green Revolution replaced the organic, renewable, and sustainable fertiliser used in agriculture with non-renewable, non-sustainable chemical inputs, rendering cattle and physical labour put in by women with cattle redundant for cultivating food grains. The white revolution undermines the foundation of the most advanced dairy culture in the world. It removes women from their position in the dairy processing sector by copying the wasteful and inefficient Western methods of animal husbandry and production of milk.

Conclusion

Food sovereignty as an activism emerging in Mexico parallel to the slow food movement in the United States, later introduced by Vandana Shiva in the Indian context, fosters a food system where the agricultural community producing food has the autonomy of distribution and consumption of the produce devoid of corporate intervention. This stands in strong contrast to the contemporary food regime, where industries control the global food system. Food sovereignty emphasises local food economies, Indigenous practices, and sustainable food production. Facilitating people's rights to

indigenous practices and the resources of production, food sovereignty protects indigeneity and functions as the base for developing narratives of resistance. In our everyday lives, food often acquires various meanings and implications that extend beyond the materiality of the food itself. As a narrative of pride, emphasis on the wholesomeness of particular traditional indigenous food in cooking and customs of preservation is an important instrument that constructs a sense of self within the modern discourse of sustainable eating. Through sustainable consumption and preservation, these narratives archive knowledge facilitating food security.

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