"*Philanthrocapitalism and the Erosion of Democracy* takes an intersectional approach to examining the work of corporate philanthropy. It is a riveting read on why we should not trust billionaires to save vulnerable communities. Charitable giving shouldn't come with a catch."

— Leah Thomas
Author of *The Intersectional Environmentalist: How to Dismantle Systems of Oppression to Protect People and Planet*

"A detailed exposé of how false climate solutions imperil our agricultural enterprise, undermine the sovereignty of the world's farmers, and affect the quality of our food supply. Shiva lays bare an account of elite corporate philanthropy's power to influence the direction of agricultural research with no public accountability."

— Peggy M. Shepard
Executive Director and Co-Founder, WE ACT For Environmental Justice

"In an exceptionally important intervention, Vandana Shiva and colleagues expose the deceptions of the domination paradigm as it enters the late phase of its destruction of life, community, and the mental well-being of our children. This book provides an important signpost to reweave our human family and regenerate what has been depleted. We must collectively resist a system that concentrates wealth and power, leaving a few billionaires to speak as if they have our best interests at heart. Buy this book, it will support your ability to discern the falsehoods!"

— Gail Bradbrook
Co-Founder of Extinction Rebellion

"A must-read for anyone fighting to reclaim food sovereignty, protect Indigenous knowledge, restore biodiversity, decolonize nature, and repair damage to the planet. The book not only identifies real threats to humanity and false solutions but also shows that we owe a debt of gratitude to the Indigenous communities preserving the most effective principles to heal, regenerate, and protect our ecosystems. This book teaches us to emancipate ourselves with dignity and freedom so we may live in harmony with nature."

— Fadhel Kaboub
Associate Professor of Economics at Denison University, President of the Global Institute for Sustainable Prosperity

PHILANTHROCAPITALISM AND THE EROSION OF DEMOCRACY

A Global Citizens' Report on the Corporate Control of Technology, Health, and Agriculture

EDITED BY Vandana Shiva

FOREWORD BY David W. Orr

SYNERGETICPRESS

Contemporary

A Treaty to Protect Our Agricultural Biodiversity

JOSÉ ESQUINAS-ALCAZAR

FOR CENTURIES PEASANTS have stored, selected, and exchanged seeds by keeping them in an evolutionary relationship with the surrounding environment. This is a heritage of humanity that has suddenly been threatened by the regime of the Green Revolution and entrance of multinational corporations into the seed sector. Over thousands of years, humanity had more than 10,000 natural species available for their nutrition, while today we have just a little more than 150 commodities grown for commercial use. Among them, only 12 of those make up 80% of the global food supply and four of them alone—rice, wheat, corn, and potato—cover more than half of our consumption.

The damage to biodiversity has been so significant that the same FAO, starting from the 1970s, began negotiations to create a UN International Treaty on Plant Genetic Resources for Food and Agriculture to contain biodiversity erosion. To this day, the treaty, coming into force in 2004, is the only international instrument protecting local farmers' rights to save and exchange their seeds within biodiversity.[1]

The treaty provides for a global genetic resources reserve of 64 plant species representing 80% of our fruit and vegetable consumption. This treaty must be continuously strengthened and protected from economic interests in the awareness of its inestimable value

for the future of humanity. In November 2019, the biennial meeting for the treaty took place in Rome, which, according to many observers, was a failure precisely because of the huge economic corporate interests present.

In terms of the hoped for and necessary advances for the protection of biodiversity, we must acknowledge that no agreement has been reached on what was considered by many to be the most important issue, namely the updating of the benefit-sharing mechanism whereby those who receive plant genetic resources included in the multilateral system are required to pay a fair share of the benefits generated by the marketing of those products. However, we should not consider it a failure. Since the treaty is constantly under definition, there are still many positive aspects. Firstly, there has been no criticism of the treaty as such. It has been consolidated and is regarded as a reference of fundamental importance by all—even by the seed industry, which would not be able to work without access to genetic resources.

Then there was the Rome meeting with the ratification of the USA and Japan, which took place in 2018, almost 15 years after the European countries. Progress has also been made on farmers' rights and the important initiative to monitor and study good practices, which will continue into 2022. The next phase is now being realized, that of interpretation of the treaty, especially on those parts where the text has become obsolete due to the introduction of new technologies. It is preferred to not reach an agreement rather than make a bad one. Therefore, as far as the benefit-sharing mechanism is concerned, it was decided to postpone the discussion. In the meantime, the huge issue of Digital Sequence Information (DSI) has opened up and presents several issues.[1]

DSI is about the digitalization of all genetic information related to seeds. In this way, it is possible to improve varieties without having access to the actual seed but by simply using genetic sequences. This

1 African Centre for Biodiversity, Third World Network, Prudence versus Pressure at the Seed Treaty, October 2019, https://www.acbio.org.za/sites/default/files/documents/Prudence_versus_Pressure_at_the_Seed_Tr eaty.pdf#_blank

new technological milestone has an immediate economic impact because some countries and seed companies when using DSI do not want to recognize the obligation of benefits distribution.

On the other hand, it is also true that the farmers who developed the original varieties in the first place and that without those seeds, there would be no information available. This is like agreeing to buy a printed book but refusing to pay the digital version of the same book, even though the copyrights are the same. We are facing a revolution in the way we conceptualize seeds. We cannot allow them to be defined as mere sequences of genetic information because they are real genetic resources. We must insist on establishing this principle. Within two years in Rome, an agreement will need to be reached. We cannot afford to lose further biodiversity in times of climate change when we will need resilient varieties to be available to everyone. The issue is so important that we have no right to pessimism.

In the early stages of the process, small producers and multinationals agreed to sit at the same table, and the latter accepted the idea that an agreement had to be reached. As in the second half of the 1970s, the loss of agroecological diversity became clear to everyone, including the FAO who had promoted the Green Revolution and even the multinationals. Every farmer had their own heterogeneous local varieties replaced with a few commercial homogeneous varieties, which became more productive only through fertilizers and pesticides. The increase in productivity was achieved at the price of biodiversity and local identity loss.

Everyone realized what the issue was and the importance of biodiversity. Uniformity equals vulnerability, and it is essential to preserve biological diversity to cope with both plant diseases and environmental changes. Ex situ germplasm banks do not solve the problem because they store frozen germplasm.[2] In this way, also the evolution of the plant freezes and no longer develops the ability to

2 "Ex-Situ Conservation Definition| Biodiversity A-Z." https://biodiversitya-z.org/content/ex-situ-Conservation

adapt to new conditions. Only in situ conservation guarantees the preservation of a living seed that has the ability to adapt.[3] The beginning of the negotiation was difficult, and we had to organize "secret meetings" to inform journalists and politicians about the facts. That was until we managed to convince the FAO to promote an international agreement.

The treaty is also crucial because of inter-country interdependence. For example, what happened in Ireland in the 1940s, when potato crops, which was the national staple food, were attacked by a fungus, the *Phytophthora infestans*. The famine that followed is considered one of the greatest catastrophes in European history as it caused the death of some two million people. But what was the underlying problem? Why was it impossible to cope with the disease? The answer is simple and brings us back to the dangerous concept of uniformity. At the end of the 1500s, a handful of uniform varieties of potatoes were introduced into Ireland. It is because of that uniformity that the *Phytophthora* fungus was able to spread easily. The conquistadors had only brought that one variety. At that point, how could this problem that threatened the rest of Europe be solved? European agronomists had to return to Latin America, and precisely to Peru, to find other diverse resistant varieties to eradicate the disease. But this is not an old story.

For example, in 1971, a corn disease attacked all American hybrid varieties and wiped them out. Confronted with evidence that commercial varieties could not adapt, agronomists searched and found resistant varieties in Africa. Diversity is what saved Europe and the United States. The only difference with the great Irish famine is that there were not millions of deaths but billions of dollars lost. This explains the inter-country interdependence, where small farmers of Latin America solve the problems of Europe and small farmers of Africa solve the problems of the USA. In times of climate change,

3 "In-Situ Conservation Definition| Biodiversity A-Z." https://biodiversitya-z.org/content/in-situ-\conservation

stability and uniformity are suicidal. These cases have recurred and continue to happen today.

Although inter-country interdependence is a fact, the dispute between developed and developing countries is always heated. At the last meeting in Rome, the chairmanship was entrusted to the USA, and the working groups were unbalanced in favor of the developed countries behind which the interests of seed companies lie. This great paradox already existed in the 1970s. As the greatest diversity resides in developing countries while the most important germplasm banks are located in developed countries, who do these genetic resources belong to?

According to the law, they belong to the country that preserves them. There was then a need to develop an agreement to ensure that these resources remained a patrimony of humanity. But even if they were declared a patrimony of humanity, who would use them? Still, the rich countries. That is why I speak of a paradox—the poorest countries, which were the actual suppliers of the raw material, had to pay royalties on the seeds afterward.

We have now lost the beautiful concept of the Patrimony of Humanity in the Treaty, but we have come to a fairly good agreement that includes the multilateral system of benefit sharing, which includes economic benefits. Profits from new varieties will be channeled into an international financial mechanism aimed at financing projects to benefit farmers in developing countries. This was not an easy objective to achieve. In the beginning, the US opposed the principle that multinationals should be required to pay a percentage of their revenues. I remember that during the deadlock, it was the multinationals themselves who declared that they would agree to pay a percentage. This episode tells us two things: the first is that it is vital for companies to have access to genetic material, and the second is that governments, in their efforts to defend multinationals, are often more royalist than the king.

But the multilateral system of benefit-sharing has to be improved because it's gathered very little revenue so far. It is a mechanism overloaded with bureaucracy. Moreover, having to trust the company

that starts to calculate the percentages only after the commercialization of the new variety takes place, which often happens about eight years after the acquisition of the genetic resources. As a matter of fact, payment for access to resources is supposed to be guaranteed. In short, it is a self-regulating mechanism that has not worked that well so far to the point that it had to be supported by voluntary funds from countries.

Still, the treaty is considered binding, and it is important for farmers and consumers. Almost 150 countries have ratified it. All legislation must adapt to it. Of course, concrete implementation depends on the priorities of each country. In Italy, for example, some regions have decided to apply it in advance without waiting for a national law.

As far as farmers are concerned, the treaty is an instrument against the overwhelming power of multinationals. It recognizes the rights of farmers as guardians of agricultural biological diversity and traditional knowledge. Nothing must oppose the exchange of conservation and breeding of traditional varieties. As far as consumers are concerned, it is necessary to inform them that there is no diversity in their plates without biodiversity.

Nor do we have the right nourishment in industrial products whose production does not respect the environment, as territories are poisoned and biodiversity destroyed while products travel thousands of kilometers and are full of chemicals. In Europe, we are spending 700 million euros a year on diseases caused by junk food. The problem is that farmers are disappearing because they cannot compete with industrial agriculture that does not pay for externalities. And with what results? Much more than we need is being produced, but people are still dying of hunger or diseases caused by poor nutrition. A third of the food produced is also being thrown away. In Spain, each inhabitant throws away an average of 160 kilos of food per year. The employment factor is also affected. Today in Spain, only 2.5% of the population works in agriculture, and unemployment rates are sky high. The employment factor is also an externality of the agribusiness system.

In short, for every dollar we pay in the agribusiness market, we pay two dollars plus tax to reduce the negative effects. The real price of the food we buy is three times higher. We must reverse this situation, starting with the elimination of subsidies to industrial agriculture.

DIGITAL SEQUENCE INFORMATION (DSI) AND THE INTERNATIONAL TREATY ON GENETIC RESOURCES

When the International Treaty was being negotiated, there was a debate over what the treaty should be named. It was deliberately decided that the name should be referent to "genetic resources" and not "seeds" (as was proposed by some countries), since what is really considered valuable is not the seed understood as physical support, but the genetic resource or information contained in its genes.

In the same way that all the information contained in a book is coded in a 28-letter vocabulary (in the case of the Spanish language) which are repeated by changing the sequence of the letters, in the case of seeds, the information is "written," in their genes in a vocabulary of only four "letters" (bases): Adenine, Guanine, Thymine, and Cytosine. In both cases, it is the sequence or order in which the respective "letters" appear that allows all the different messages in the book or all the characteristics of the plant to be expressed.

When scientists can "read" the genetic code of a traditional seed or variety, it is possible to reproduce it with no other limits than those imposed by the available technology. Today, Digital Sequential Information (DSI) technology allows us to access these genetic resources, reproduce and use them without the need to have access to the physical or tangible seed.

For the reader of a book, it is the content, regardless of whether we have access to it physically or virtually, which is why the copyright is paid. Similarly, for the researcher or seed company, the value of a traditional variety or seed depends on its genes or genetic sequences regardless of whether we have access to them physically (seed) or virtually (DSI).

The crux of the matter is that the DSI is not only information, but the genetic resource in virtual form; therefore, its access, use, and benefit-sharing should be regulated as a genetic resource and not simply as information in the multilateral system of access and benefit sharing. If we were to allow access to the virtual genetic resource without the obligation to share benefits, we would have emptied the treaty of its content and thrown 30 years of difficult negotiations overboard in search of a balance between the interests of those who contribute their genetic resources and those who contribute the technology.

Ag Tech: Bill & Melinda Gates Agricultural Innovations in Argentina

FERNANDO CABALEIRO

BILL GATES HAS landed in the Argentine agrifood system. He has done so at the hands of the Inter-American Institute for Cooperation on Agriculture (IICA), an international organization supported by the United States of America. The partnership has clearly blurred the line between the public and the private sectors. It is truly a covert entity of agribusiness through which the Bill & Melinda Gates "philanthrocapitalist" Foundation has been operating, since 2011, by making contributions and donations.

In 2018, IICA and Bill Gates' Microsoft built a strategic alliance called the Alliance for Digital Education in the Americas with the objective of implementing a complete digitalization of agriculture through a broad technological platform developed by Gates' computer company using the Internet of Things (IoT), Big Data and Artificial Intelligence (AI) tools, as well as the application of innovation, information technology, and communication in development projects.[1]

Previously, IICA and Microsoft had tested the development of prototypes using the IoT and AI to combat diseases that occur in coffee cultivation and create a platform to strengthen farmers' capacity to handle agricultural issues.

In addition to the celebrated strategic alliance with Microsoft, Gates was joined by the Global Hitss corporation, a subsidiary of