

BIOTECHNOLOGY AS ‘CULTURAL INVASION’: THEOLOGICAL REFLECTIONS ON FOOD SOVEREIGNTY AND COMMUNITY BUILDING IN AFRICA.¹

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Abstract

With famine gripping much of Southern Africa, issues of hunger and food security are a key ethical concern for Christians in the subcontinent. This article examines the growing debate around the implications of Genetic Engineering for agriculture and food security from the perspective of social development. Drawing on the conceptual framework of dialogical and anti-dialogical action suggested by the Brazilian educationalist, Paulo Freire, the author argues that rather than being a solution to the problem, this kind of technology will further exacerbate the inequality and poverty that is at the root of hunger and famine. The article ends with a reflection on food sovereignty and community building in Africa.

1. *The seed is mine?*

In 1996 Charles van Onselen, historian at the University of the Witwatersrand published his magnum opus, *The Seed is Mine: The Life of Kas Maine, a South African Sharecropper 1894-1985*. The title comes from a defiant statement made by Maine, in the face of the destruction of his life and livelihood by the political economy of colonialism and apartheid:

*The seed is mine. The ploughshare is mine. The span of oxen is mine. Everything is mine. Only the land is theirs.*²

Absurd as it seems, future generations of Africans may think of him as a lucky man. The reason for this is that economic globalization, and its impact through biotechnology and the genetic engineering of plant and animal life on food supply, is headed in a direction in which not only will the Kas Maine's of the world not own the land they live on, but they will also no longer even own the wherewithal to make a living. The sequel to Von Onselen's book may well have to carry the title, *Even the Seed is not Mine*.

This is not a minor issue in the world today. Even as this article is being written there are daily news reports of the impending food crisis in Sub-Saharan Africa. Millions of people are at risk of hunger, and large numbers are already dying of starvation. The World Food Summit ended in Rome a short while ago, with 800 million people in the world still hungry, and little evidence that the 1996 pledge by 185 nations to halve the number of

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1. This article was presented at the Theological Society of South Africa's annual meeting, Pietermaritzburg, June 2002. It is part of wider research and reflection on the implications of GE for food sovereignty in Africa. See also my article, "Life, Livelihoods and God: Why Genetically Modified Organisms oppose Caring for Life" in the July 2002 edition of *The Ecumenical Review* (Geneva: WCC).
 2. See Charles van Onselen, *The Seed is Mine: The Life of Kas Maine, a South African Sharecropper 1894-1985* (Cape Town: David Philip, 1996). Frontispiece.

hungry people in the world by 2015 will be met. In fact progress has lagged at about 60% behind the goals for the first five years.³

A major part of the issue of feeding the hungry today is centred – as our reference to Kas Maine noted – in the struggle for the control of seed. It has been illustrated in recent days by events in Southern Africa. Earlier, and in the face of the famine that is gripping the land, Zimbabwe rejected a US government donation of 10 000 tonnes of maize, worth \$6m. However, this was not just another petulant act by the Mugabe government. The reason was that the donated maize had not been certified GE free. Andrew Meldrum reported:

Despite widespread hunger, Zimbabwe refused the shipment of maize because it came in the form of whole kernels, which, if used as seed, could spread GM strains across the country...

The country's farmers feel that GM kernels could threaten Zimbabwe's production of hybrid maize. If Zimbabwe's maize were altered by GM crops planted nearby, it could lose its certification. A non-GM product, noted for its suitability for a hot growing season it would then be barred from export.⁴

This is a matter of importance to Christians.⁵ Food, and particularly *bread* as the staple diet of biblical cultures, is deeply embedded in the Biblical witness. Whilst Jesus reminds us that "we shall not live by bread alone", he nevertheless is deeply concerned about hungry people, and makes it clear that feeding those who are hungry is an obligation for Christians (Mt 25:35). As Nicolai Berdjaiev reminds us: "My daily bread is an economic question; the daily bread of my neighbour is a spiritual question". Yet our spiritual task immediately draws us into the web of conflict and tension around feeding the poor captured by Dom Helder Camara:

When I gave bread to the poor they called me a saint. When I asked why they had no bread, they called me a communist.

Here in this article, I am not in search of sainthood, but want rather to ask the "communist" question, and I want to ask it as a theologian. I want to reflect on the interaction between economics, science, development and food, and particularly on the role of biotechnology in solving world hunger. For the struggle for land, for food and for seed are all bound together today by the issue of GE. One of the key questions of public morality that we face as Christians, then, is whether the biotechnology industry, and particularly its promise of genetically engineered plants is really the answer to hunger in the world and Africa today, or whether it is not part of the problem.⁶

The compassion and passion reflected in the article is born of Christian convictions, while the language uses little of the traditional theological categories. Of necessity this is a frontier in public morality today, and we are in search of words that enable us to speak to people beyond the walls of the church. I trust that the discerning reader will appreciate the theological underpinning of the use of Paulo Freire in the article.

3. See Peter Rosset, "World Food Summit: What Went Wrong" at www.fpif.org/commentary/2002/0206hunger.html

4. Andrew Meldrum. "Starving Zimbabwe shuns offer of GM maize" *The Guardian Saturday* 1 June, 2002.

5. The material in this paragraph is drawn from a text I have prepared for the World Council of Churches working group on GE in Agriculture. I am indebted to those colleagues for the insights, and stimulating discussion they have provided.

6. It should be more than clear that this article does not concern itself with the bioethical issues involved with GE in human species.

2. The promise of GE for agriculture

Whilst farmers have for thousands of years practiced selective breeding to develop the gene pool of plants and animals, GE presents the world with a dramatic increase in the power and possibilities for changing and adapting plant and animal life.⁷ GE is the manipulation of genes within species or between species, and even between plants and animals. It was made possible by the discovery of the structure of DNA (deoxyribonucleic acid) in 1953, and then in the 1970's of a family of enzymes which made it possible for DNA to be isolated, cut and then pasted onto another fragment of DNA from another organisms. This creates recombinant DNA, which can be infinitely multiplied, and then introduced back into the cell of a living organism such as a plant. Under optimum conditions each selected plant cell can then grow to become a transgenic plant with every cell in the plant having the newly inherited DNA, now known as a Genetically Modified Organism (GMO). This means that any daughter plant that develops through cuttings or pollination is also transgenic, and that all future pollen and seed will carry the foreign genes.⁸

There are two basic types of transgenic plants, namely, those in which the properties of the food is itself modified through the gene change, and those in which the food is not itself modified but which now carries a gene that enhances resistance to disease, drought or herbicide. Tobacco was the first plant to be genetically engineered in 1983, and since then tomato, Soya beans, oilseed grape, chicory, maize and cotton have been genetically modified, planted and sold.

In summary there are currently six potential applications of GE to agriculture and food production. These are (1) to increase the yields of crops; (2) to produce crops that can withstand environmental pressures such as drought, salinity or frost; (3) to increase the nutritional value of the plant, so that staple legumes and cereals would carry vital amino acids which they currently lack, thus reducing the required quantity of food intake; (4) to enhance resistance to disease, weeds and pests – or, as in most cases, to enhance tolerance to designer herbicides which kill off the disease, weeds or pests but leave the plant healthy; (5) to minimize the need for fertilizers and agrochemicals; and (6) to enhance the texture, flavour or shelf-life of the plant, thus aiding global trade in foods that spoil easily, particularly fruit and vegetables.

On the face of it, therefore, GMOs present themselves as a wonderful solution to world concerns about food security, so that with the correct application of certain techniques, hunger could be a thing of the past. To many people, this contribution to social development is the key blessing that flows from the technology, and so an important role that the sponsors of GMOs and biotechnology have is to promote themselves as a group of people that really cares for life and for people's livelihoods. For example, at the meeting of the World Food Summit last week (June 9-13, 2002), the United States successfully promoted genetically modified crops as a solution to famine. Writing in the *Guardian* newspaper, Rory Carroll, reports that:

Environmental and agricultural groups accused the US of steamrolling the summit into approving biotechnology, after robust lobbying by Washington.

“The US played very hard and succeeded. They now have the moral authority to use genetically modified food for aid purposes,” said Fernando Amansa of Oxfam...

7. And, of course, human life. See the previous note.

8. Bruce, Donald and Ann. *Engineering Genesis: The Ethics of Genetic Engineering in Non-Human Species*. (London: Earthscan, 1999). I am indebted to this excellent book for enabling me, a non-scientist, to understand key aspects of the detail and scope of GE.

The US delegation was led by the agriculture secretary, Ann Veneman, and made no secret that its priority was to promote the wider use of biotechnology, an industry dominated by American companies.

“Biotechnology has tremendous potential to develop products that can be more suited to areas of the world where there is persistent hunger,” Ms Veneman said. “There is no food safety issue whatsoever”.

Another delegate was more forthright: “We’re here to sell biotech, and that’s what we’ve done”.⁹

This theme has been picked up by various people in developing countries. For example, Dr Florence Wambugu of Kenya, author of the book, *Modifying Africa: How Biotechnology can Benefit the Poor and Hungry*, argues that biotechnology, and specifically GE offers the only solution to the food crisis in sub-Saharan Africa.¹⁰ Similarly in South Africa, Prof Jennifer Thompson of UCT has published a book, *Food for Africa*, which makes similar claims.

It would seem then that the issue is clear. Biotechnology and GE is the only way to solve the food crisis in poor and developing countries. Yet the truth of the matter is that this is an extremely limited perspective, and there are many, many strident voices from the Third World – voices of scientists, academics, farmers, indigenous peoples, activists, and people of faith – who believe that biotechnology and GE are so deeply embedded in what is wrong in the world that it cannot possibly offer any constructive solutions. Witness these sentiments:

We, the undersigned delegates of African countries participating in the 5th Extraordinary Session of the Commission on Genetic Resources, 8-12 June 1998, Rome, strongly object that the image of the poor and hungry from our countries is being used by giant multinational corporations to push a technology that is neither safe, environmentally friendly, nor economically beneficial to us...

We do not believe that such companies or gene technologies will help our farmers to produce the food that is needed in the 21st century. On the contrary, we think it will destroy the diversity, the local knowledge and the sustainable agricultural systems that our farmers have developed for millennia and that it will thus undermine our capacity to feed ourselves ...

We agree and accept that mutual help is needed to further improve agricultural production in our countries. We also believe that Western science can contribute to this. But it should be done in the basis of understanding and respect for what is already there. It should be building on local knowledge, rather than replacing and destroying it. And most importantly: it should address the real needs of our people, rather than serving only to swell the pockets and control the giant of industrial corporations.¹¹

9. “GM firms the only winners at food talks summit.” at www.guardian.co.uk/gmdebates/Story/0,2763,737156,00.html

10. See www.modifyingafrica.net/news.htm

11. *Let Nature’s Harvest Continue*. A statement from all the African delegates (except South Africa) to FAO negotiations on the International Undertaking for Plant Genetic Resources, June 1998. www.oneworld.org/panos/news/biodoc5.htm

This kind of response is not isolated.¹² From a specifically Christian perspective, the most strident opposition to GE in agriculture has come from the British Churches development agency, Christian Aid in their report, *Selling Suicide: Farming, False Promises and Genetic Engineering in Developing Countries*. The document argues that GM crops are irrelevant to ending hunger, the new technology puts too much power over food into too few hands, and that too little is done to help small farmers grow food in sustainable and organic ways.¹³

A careful reading of the statements and documents produced by those in favour of, and those opposed to, GE in agriculture suggests that there are two fundamental levels of debate, one internal to science, and one that places science in a wider cultural perspective. They are connected at a deep level by the connection between life and livelihoods. Both warrant theological engagement. The first level of debate concerns the scientific potential, validity, and safeguards to such new endeavours. It pits scientist against scientist, and particularly the recipients of the huge research funding that the multi-national biotech companies offer against those who work for NGO and Civil Society organizations, and some independent university laboratories. It is the level at which scientists and regulatory bodies create “ethics committees” to see to the ethics of GE. Theologically, it raises issues about life itself, and whether we should be doing this kind of thing with God’s creation in the first place, or alternatively whether God has not in fact given us the wisdom and ability to do it, for the benefit of those in need. As necessary as this level of debate is, and while recognizing its connection to the second level, it is not the level with which I want to be engaged here.

The second level debate lifts us to a wider social and cultural level. It is not interested in ethics in the sense understood by industry or state appointed ethics committees. It is interested in livelihoods, the broader socio-economic ethical framework in which the issues of science, technology, economy, and power relate to poor communities and their access to food. It is interested in the claims that are made about the contribution of GE to social development and particularly poverty relief. It is here that eyebrows are raised at competent scientists who imagine themselves to be competent social scientists; making statements about a world they know nothing about, on the basis of a world they believe they know everything about. For “development” is a contested term, and anyone who wishes to get involved in the debates about world hunger and poverty alleviation needs to be aware of the sharp divide that exists between two diametrically opposed development paradigms, a distinction which we feel is well articulated by Freire’s terms, anti-dialogical and dialogical action.

3. Eurogence, science and development.

The dominant paradigm of development as *modernization*, has its origins in the emergence of modern, secular European culture through the process we call the Enlightenment and, in particular, the idea of progress, and the split between science and history. Both of these

12. A thoroughgoing critique of biotechnology and GE in agriculture is offered by Brewster Kneen, *Farmageddon*. There are a wide range of statements and condemnations of GE in agriculture available on the Internet. See for example, Third World Network www.twinside.org/bio.htm; The Institute of Science in Society (ISIS) at www.i-sis.org.uk; Food First: The Institute for Food and Development Policy at www.foodfirst.org; *Grains of Delusion: Golden Rice seen from the Ground*. Joint Report by BIOTHAI (Thailand), CEDAC (Cambodia), DRCSC (India), GRAIN, MASIPAG (Philippines), PAN-Indonesia and UBINIG (Bangladesh), February 2001. www.grain.org/publications/reports/delusion.htm; Union of Concerned Scientists (USA) at www.ucsusa.org/; Gene Watch UK at www.genewatch.org/; “NGO Statement for the International Conference New Biotechnology Foods and Crops: Science, Safety and Society. Bangkok, 10-12 July 2001” at beb@igc.org; etc.

13. Andrew Simms, *Selling Suicide* (London: Christian Aid, 1999).

elements have played a crucial and positive role in our world through political ideas like democracy and human rights, and through various medical, scientific and technological breakthroughs. However, the deep connection between the emergence of these ideas alongside the emergence of capitalism, slavery and colonialism, has meant that issues of power and subjugation are deeply embedded in the concept of modernization, and that modernization has in turn been infected by what I call Eurogance.

Usually seen as a value-free universal search for truth, it is crucial to recognize science as a particular worldview emerging in a particular set of social circumstances. The discovery of human agency in “history”, was at the same time the splitting off of nature as a realm that could be observed, interrogated, experimented with and altered. Nature, in other words, became a “thing” that could be dominated and manipulated by humans, and with that came the emergence of modern biology, zoology, and a host of other scientific disciplines. Vandana Shiva has further convincingly demonstrated how modern science was at the same time a deeply patriarchal project, a patriarchy that served both capitalism and colonialism, and was in turn served by them:

The “de-mothering” of nature through modern science and the marriage of knowledge with power was simultaneously a source of subjugating women as well as non-European peoples. Robert Boyle, the famous scientist who was also the Governor of the New England Company, saw the rise of mechanical philosophy as an instrument of power not just over nature but also over the original inhabitants of America. He explicitly declared his intention of ridding the New England Indians of their ridiculous notions about the workings of nature. He attacked their perception of nature, “as a kind of goddess”, and argued that “the veneration, wherewith men are imbued for what they call nature, has been a discouraging impediment to the empire of man over the inferior creatures of God”.¹⁴

This relationship between science, colonialism and power meant that to western European men, there was no difference between controlling nature and controlling natives.¹⁵ It was the very ability to do the former that marked off their superiority over and therefore justified their control of the latter. As the natives were in any case shown – by science – to be very close nature, it really was the same thing. The tragic story of one of our own citizens, Saartje Baartman, whose remains have recently been returned from France, is a poignant illustration of Eurogance, this scientific desire of the West to control both nature and the natives:¹⁶

Sara Bartman was a Khoi Khoi woman who was taken from South Africa, and then exhibited as a freak across Britain. In 1814 she was taken to France, and became the object of scientific and medical research that formed the bedrock of European ideas about black female sexuality. She died the next year. But even after her death, Sara Baartman remained an object of imperialist scientific investigation. In the name of Science, her sexual organs and brain were displayed in the Musee de l’Homme in Paris until as recently as 1985.”¹⁷

The First World War may have put an end to naked colonialism, but it certainly did not put an end to this powerful connection between capitalism, imperialism, patriarchy and

14. Vandana Shiva, *Staying Alive*. p.19.

15. The awkward and uncomfortable use of the term “natives” is intended to jar.

16. See Glynis Crook, “Some Dignity at last for Saartje Baartman”. *The Star*, April 29, 2002.

17. Quoted from a review of the movie, *The Life and Times of Sara Bartman* – “The “Hottentot Venus”” by Zola Maseko. See www.frif.com/new99/hottento.html

science. The desire by the North to control both nature and the natives in the search for greater and greater profit found new expression in the language of “development”. It was a perfect term, for it drew on the centuries of western thinking about growth and progress. Crucially, it also cemented the link between nature and natives. The development metaphor comes, of course, from nature itself. Natural things, like trees and animals, start small and then develop to become bigger. Science enables us to help nature develop better. Likewise, natives start “small”, and we help them to become “bigger”. With the term colonialism out of vogue, what better than the term “development”!

Thus, after the Second World War the binary relationship of colonizer and colonized was completely replaced with that of developed and underdeveloped. Almost without exception, those nations that were colonies – the natives – were now understood as underdeveloped, and those that were the colonial powers were “developed”. Eurogance had found a new language. Gilbert Rist puts it like this:

From 1949 onwards, often without realizing it, more than two billion inhabitants of the planet found themselves changing their name, being “officially” regarded as they appeared in the eyes of others, called upon to deepen their Westernization by repudiating their own values. No longer Africa, Latin American or Asian (not to speak of Bambara, Shona, Berber, Quechua, Aymra, Balinese or Mongol), they were simply “underdeveloped”.¹⁸

By defining “underdevelopment” as something that the natives simply are, the definition focused on their perceived shortcomings (from the vantage point of the North), rather than the historical and political relationships between nations dominated by the North (such as slavery or colonialism). Furthermore, it made “aid” the only solution to the problem. Developed nations were called upon to assist underdeveloped nations to develop to “be like them”¹⁹, mainly through the applications of the benefits of science and the control of nature through industrialization.

4. Genetic engineering as cultural invasion

Given this history, it is no wonder that there are many who are deeply suspicious of development and its goals. Rist, for example, argues that development is “an element in the religion of modernity” allied to western ideas of progress, growth and linear notions of history,²⁰ a belief that has had disastrous consequences for the world. Arturo Escobar calls development a “top-down, ethnocentric and technocratic approach... a force so destructive to Third World cultures, ironically in the name of people’s interests”²¹. Vandana Shiva call this *maldevelopment*, “the violation of the integrity of organic, interconnected and interdependent systems, that sets in motion a process of exploitation, inequality, injustice and violence”.²² She quotes Gustavo Esteva saying, “My people are tired of development. They just want to live”²³. David Korten concurs:

18. Gilbert Rist, *The History of Development: From Western Origins to Global Faith* (London: Zed Books, 1997). p.79.

19. Title of an essay by Eduardo Galeano in Majid Rahnema and Victoria Bawtree (eds) *The Post-Development Reader*. (Cape Town: David Philip Publishers, 1997) p.214-222.

20. Rist. *History of Development*. p.21.

21. Arturo Escobar, “The Making and Unmaking of the Third World Through Development” in Rahnema and Bawtree (eds) *The Post-Development Reader* p.81.

22. Vandana Shiva, *Staying Alive: Women, Ecology and Development*. (London: Zed Books, 1989) p.5

23. Shiva, *Staying Alive*. p.13.

We have become prisoners of an obsolete vision of our global reality and the nature of human progress. This vision equates human progress with growth in the market value of economic output and subordinates both human and environmental considerations to that goal. The result has been the extravagant consumption of the world's resources by a favoured few with little recognition of the social and environment costs borne by the many. These costs have now accumulated to the point of endangering the continued well-being of everyone on planet earth.²⁴

There are many ways of trying to understand what is wrong with the dominant development paradigm, but I have been struck by Paulo Freire's distinction between anti-dialogical and dialogical action, and believe that this provides a helpful description for Christians to make sense of the contestation around development paradigms.²⁵ Freire's classic work, *Pedagogy of the Oppressed*,²⁶ is technically concerned about adult literacy and education that seeks the liberation, rather than the enslavement of the poor and oppressed. Freire is very conscious of how education can be and often is used as a tool of enslavement, what he calls "banking education".²⁷ The task of the teacher is to open the head of the student and to deposit the knowledge that the teacher has, into the brain of the student. Here the teacher knows everything and the student knows nothing. What Freire points out, is that the framework and content of this knowledge is shaped by the power relationships between the teacher and the student, so that the knowledge the student gains in "banking education" will never challenge the power imbalance in the relationship itself. It is so embedded in it that it is hidden. It simply is. It is natural. It is the way the world is. Clearly at root, this is a system that does not take the humanity of the learner seriously. In fact, in the very act of teaching, the student is dehumanized so that education and oppression go hand in hand.

Against this Freire argues for an approach to education that takes seriously the humanity of the learner, and the power relationships that are at play in wider society symbolized by the teacher-student relationships. Instead of banking education he proposes "problem solving education",²⁸ an approach that enables both the teacher and the learner to face the world as adult humans, to problematise the power relationship they represent, and then through praxis – the interface between theory and action – to change the dehumanizing circumstances of the world. The difference between people and things, is that people communicate, so authentic humanization happens through dialogue.

Dialogue with the people is neither a concession nor a gift, much less a tactic to be used for domination. Dialogue, as the encounter among men (*sic*) to "name" the world, is a fundamental precondition for their true humanization.²⁹

One clear difference between the two approaches to education, then, is that the latter is dialogical, whereas the former is anti-dialogical, and this provides the framework for his final chapter in which he examines the theories of what he calls dialogical and anti-dialogical action. Freire, writing out of the context of the colonial domination of South

24. David Korten. *Getting to the 21st Century: Voluntary Action and the Global Agenda*. (West Hartford, Connecticut: Kumarian Press, 1990), p.3.

25. Freire (1921-97) was an educator not a theologian, though he was an active and engaged Christian. When he was forced into exile from his homeland, Brazil, he worked for the World Council of Churches for ten years (1970-80). A member of the Roman Catholic Church, he was committed to ecumenism and had a strong influence on the development of Latin American liberation theology and in particular on the life of the basic Christian communities.

26. Paulo Freire, *Pedagogy of the Oppressed* Revised Ed. (London: Penguin, 1996).

27. Freire, *Pedagogy of the Oppressed*. p.53.

28. Freire, *Pedagogy of the Oppressed*. p.60.

29. Freire, *Pedagogy of the Oppressed*. p.118.

America by North America, captures precisely and neatly, the dominant development paradigm as we have discussed it above:

In sum, there is no oppressive reality which is not at the same time necessarily anti-dialogical, just as there is no anti-dialogue in which the oppressors do not untiringly dedicate themselves to the constant conquest of the oppressed.³⁰

For Freire, anti-dialogical action has four key characteristics, namely, conquest, divide-and-rule, manipulation and cultural invasion. Within this broad framework, it is the characteristic of “cultural invasion” that warrants our attention in this article. Freire explains the term as follows:

In this phenomenon, the invaders penetrate the cultural context of another group, in disrespect of the latter’s potentialities; they impose their own view of the world upon those they invade and inhibit the creativity of the invaded by curbing their expression. Whether urbane or harsh, cultural invasion is thus always an act of violence against the persons of the invaded culture, who lose their originality or face the threat of losing it.³¹

With its connection to the dominant development paradigm, the role and place of science and technology in conquest, and its unstinting support for global capitalism and free trade (in third world markets), I want to suggest that one way of understanding GE is as “cultural invasion”. We see the powerful relationship between developing nature and developing natives that has dominated the approach of the North to the people of the South for centuries. In fact, the primary moral justification of GE is that it will enable the North to make life for the natives better by making nature better. But all along, there is the suspicion that perhaps the very same reasons that lead the North to want to control both nature and natives, namely power and profit, is behind the desire to “develop” both nature and natives. Biotechnology and GE fits perfectly into the dominant model, for they are the supreme icons of the Eurogiant desire to manipulate both nature and the natives in the pursuit of commercial gain by those who control science.

The legacy of the colonial relationship lives on in this model of development, and we see it so clearly demonstrated in the powerful role that just five giant agrochemical companies³² – Monsanto, Sygenta, DuPont, Dow Chemical and Aventis Crop Science – play in the world: controlling markets, pressurizing legislators, setting up and funding “not-for-profit” lobby groups, enforcing patents, running illegal trials, stealing genetic materials from indigenous peoples and cultures, controlling researchers through contract obligations, taking farmers to court and developing “terminator” seeds.³³ Freire’s words ring true:

Cultural invasion, which serves the ends of conquest and the preservation of oppression, always involves a parochial view of reality, a static perception of the world, and the imposition of one worldview upon another. It implies the “superiority” of the invader and the “inferiority” of those who are invaded, as well as the imposition of values by the former, who possess the latter and are afraid of losing them.

Cultural invasion further signifies that the ultimate seat of decision regarding the action of those who are invaded lies not with them but with the invaders. And when the power of

30. Freire, *Pedagogy of the Oppressed*. p.121.

31. Freire, *Pedagogy of the Oppressed*. p.133.

32. See the Article by Ann M. Thayer in *Chemical and Engineering News*, Sept 17, 2001 Vol 79, no 38 pp.25-32.

33. One of the best records of this is Kneen, *Farmageddon*, but the many records of this type of activity exist in the common domain on countless web pages.

decision is located outside rather than within the one who should decide, the latter has only the illusion of deciding.³⁴

This, more than any other reason, is why so many people in both the South and the North are opposed to GE and biotechnology. Whilst promoters of GE will always try to argue that it is overfed “greens” and Luddites from the West who for sentimental reasons oppose progress, the truth lies elsewhere. The survivors of *maldevelopment* and their allies know only too well that the dominant model of development serves commercial interests, and in the process a host of other factors to do with people, community, culture, and the earth have been lost. The theologian, Celia Deane-Drummond puts it succinctly:

So far the direction taken by much of food technology seems far from desirable as a global project. Even those projects that claim to be offering assistance to the poorer nations of the world, such as the introduction of Vitamin A in rice plants, seem like a technological fix that assumes a dubious model of development. Indeed, the political assumptions behind the call for a spread of the technology to poorer parts of the world betray a lack of real appreciation of the limitations of the “development” models of the past. A fostering of respect for local communities and cultures might encourage a deeper Wisdom that is prepared to listen to the voices of those who are different culturally and who do not share the philosophical assumptions that have dominated the Western world.³⁵

5. Food sovereignty and community building

For those who experience the “limitations of the development models of the past” and who “do not share the philosophical assumptions” of the West, there is another paradigm of development, one that takes a route that is resolutely opposed to GE. This can be described by Freire’s concept of dialogical action:

The dialogical theory of action does not involve a subject, who dominates by virtue of conquest, and a dominated object. Instead, there are subjects who meet to name the world in order to transform it.³⁶

Dialogical action, embodying so much that can be affirmed by Christians, has the characteristics of cooperation, unity for liberation, organization and cultural synthesis. The latter is the opposite of cultural invasion:

In cultural synthesis there are no invaders; hence, there are no imposed models. In their stead, there are actors who critically analyse reality (never separating this analysis from action) and intervene as Subjects in the historical process.

Instead of following predetermined plans, leaders and people, mutually identified, together create the guidelines of their action. In this synthesis, leaders and people are somehow reborn in new knowledge and action.³⁷

Out of dialogical action, emerges a range of models that take seriously local culture and conditions, they recognize that it is people and not things that must be “developed”, that control over one’s life and choices is at the heart of development, that outside aid and technology creates dependency and further undermines self-sufficiency, and that the goal

34. Freire, *Pedagogy of the Oppressed*. p.141.

35. Celia Deane-Drummond. *Biology and Theology Today: Exploring the Boundaries*. (London: SCM Press, 2001) p.108.

36. Freire, *Pedagogy of the Oppressed* p.148.

37. Freire, *Pedagogy of the Oppressed* p.162.

for a community of people is to sustain and enhance their livelihoods, balancing the environment with social needs.³⁸ In terms of food, these models recognize that the issue is not more food but less hungry people³⁹, that it is not about higher production but greater distribution,⁴⁰ that it is not about producing crops for foreign markets but in feeding local populations,⁴¹ that it is better to have people employed to dig up weeds and spend their wages in the community than to purchase expensive herbicides from companies outside the community.

What this is implying is that whilst the dominant model of development may talk about food *security*, which can then be “secured” by outside technology, alternative models are concerned about food *sovereignty*, in other words people exercising their own sovereignty over the food chain. When I submitted the title of this paper a few months ago I was aware of the emerging debate between these two concepts, and it has been intriguing to see that just last week the term *food sovereignty* has been given political prominence by the NGO and Civil Society Organization gathering at the World Food Summit in Rome:⁴²

In contrast to the proposed International Alliance Against Hunger, which is worse than “more of the same medicine”, we counterpose the unifying concept of Food Sovereignty as the umbrella under which we outline the actions and strategies that are needed to truly end hunger.

What is Food Sovereignty? Food Sovereignty is the RIGHT of peoples, communities, and countries to define their own agricultural, labour, fishing, food and land policies which are ecologically, socially, economically and culturally appropriate to their unique circumstances. It includes the true right to food and to produce food, which means that all people have the right to safe, nutritious and culturally appropriate food and to food-producing resources and the ability to sustain themselves and their societies.

Included in the requirements for such sovereignty are these two:

- community control over productive resources, as opposed to corporate ownership of land, water, and genetic and other resources;
- protecting seeds, the basis of food and life itself, for the free exchange and use of farmers, which means no patents on life and a moratorium on the genetically modified crops which lead to the genetic pollution of essential genetic diversity of plants and animals.

The statement goes on to say that two tasks to achieve Food Sovereignty are:

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38. The literature in support of this is vast. See David Korten, *Getting to the 21st Century: Voluntary Action and the Global Agenda* (West Hartford, Connecticut: Kumarian Press, 1990); Robert Chambers, *Whose Reality Counts: Putting the first last* (London: Intermediate Technology Publications, 1997); Larry Rasmussen, *Earth Community, Earth Ethics* (Maryknoll: Orbis, 1996); Vandana Shiva, *Staying Alive*; and a range of contributors to Rahnema and Bawtree, *The Post Development Reader*.
39. The point has often been made that countries can be net exporters of food even when their own citizens are dying of famine, such as in Ireland between 1845-49, and Ethiopia in the 1980s.
40. The FAO estimates that current world food production stands at 150% of current world requirements. Furthermore, the track record of the “Green Revolution” is poor in that whilst food production did rise, so did the number of people growing hungry. See *Selling Suicide*, p.5.
41. It makes no sense, in other words, to turn fields of agricultural land into cotton plantations, even if this does bring in foreign currency. The chances are slight of that foreign currency filtering down to the local labourers so that they are better fed than if they simply grew their own food. Yet, the current Debt Crisis and Structural Adjustment Policies often put the value of foreign currency ahead of the hunger of rural populations.
42. See “Food Sovereignty: A Right for All. Political Statement of the NGO/CSO Forum for Food Sovereignty”, Rome June 14, 2002. www.foodfirst.org/progs/global/food/finaldeclaration.html

- we will fight to stop genetic engineering and the patenting of life and demand an immediate ban of terminator and similar genetic use restriction technologies; and
- we demand an end for the passing off of GMO food in food aid.

Whereas biotechnology and the GE of foodstuffs removes control of the food chain from poor and vulnerable people, and is experienced as cultural invasion, food sovereignty provides a framework for understanding food within the context of community building. And it is the building of strong, vibrant and healthy communities that is surely the goal of the church's contribution towards solving hunger in our continent.