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# Constructing Food for Shareholder Value

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*The Food Industry Workshop: "Evaluate the pathways to be taken by new agricultural biotechnology food products; issues of communication, regulation, and concern over something so 'personal' as food; and ways in which the production of new food crops might impact the structure of the agricultural industry and the food industry itself."*

This is one way to frame the discussion, but we must recognize that the title itself — food industry — is a cultural expression. It is a way of seeing the world. It also implies a monoculture: there is one correct way to view the world, including food and agriculture. This is the way the wealthy industrialized societies of the North view the world out of their historically and culturally distinct experience. But what about other perspectives and experiences? A woman's perspective, or that of a laid off worker? Or the perspective of a lesser developed country's subsistence farmer? Or an aboriginal in Costa Rica, or in the southwest or north of this continent?

Are we even aware of the biases and assumptions that we take on when we use the cultural expression "food industry" and do we, or are we willing, to take account of how others might view these issues?

I am not castigating the NABC, because when I raise these alternatives, I must say that the NABC looks like the most thoughtful and sincere discussion on biotechnology going. Look, for comparison, at the hype surrounding the 1996 "Agbiotech International Conference" being held in Saskatoon. "New Technologies! New Marketing Partners! New Opportunities!" is the conference slogan. Complete with exclamation marks. In keeping with their slogan, I can find no indication in their program that there will be any critical discussion of anything. (Not that this surprises me, given who has organized the event.)

Or look at the program for Bio '96 in Philadelphia. As far as I can see from the program, there is one workshop, out of about 80, that deals with ethics, titled "Characterizing & Addressing Ethical Issues." The information package states "The Bioethics Committee and industry representatives will discuss case studies where research and product development yield ethical implications, and will participate in analysis of ethical implications of case studies."

The language boggles my mind: what is meant by "yield ethical implications"?

At first I thought there had been a mistake when I saw that I was down to speak in the Economic and Structural Issues session, rather than yesterday's session on Social Issues, Regulations and Ethics. But as I pondered it, I realized that this is indeed the right slot for me. When I studied theology, ethics was my major interest. The subject was referred to as Christian ethics or social ethics, and the focus was largely political and social, not individual and personal. Since then, I have found myself increasingly focused on economics and its institutions and structures — as well as the values and assumptions on which they are based. Meanwhile, it seems to me that 'ethics' has been increasingly defined in individualistic terms as issues of personal choice. The rising field of medical ethics and bioethics is a good illustration of this, where individual choice reigns supreme and social good does not seem to be even a recognizable category, much less an ethical framework.

A good example of the application of this individualized ethics is the V-Chip, described by *New Scientist* magazine as a way "to banish TV sex and violence from American homes." This bit of technology seems to be based on the assumption that there is no way, or desire, to get rid of TV sex and violence, along with an acknowledgment of negative effects on children. An obvious social problem of rather substantial ethical significance is reduced to a matter of individual parental option.

And while it may strike you as stretching the point, it seems to me that the labeling of genetically engineered foods is being approached in much the same way. There appear to be no questions raised either about the production of violence on TV or about the production of genetically engineered food. In the case of food, the biotechnology industry promotes the position that it would be absurd, unworkable, and costly to label genetically engineered food. In a 1993 interview, an FDA spokesperson said: "It would not be merely a matter of putting a sticker on a tomato or a banana. Producers would have to segregate the genetically engineered foods from other varieties. Does the label have to follow the food processing chain? It would increase the cost of these foods to consumers and would disrupt our complex food distribution system."<sup>1</sup>

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<sup>1</sup>James Maryanski, biotechnology coordinator, Center for Food Safety and Applied Nutrition, FDA, in a 1993 interview by FDA consumer writer Mary Alice Sudduth.

Monsanto's 1995 kit for the American Dietetic Association<sup>2</sup> takes the same line: "Some consumers believe that foods derived from new plant varieties [notice the slick linguistic trick of referring to "new plant varieties"] should be labeled as such. These individuals [only "individuals," of course] base their position on the consumer's 'right to know' the food's method of production. Practical considerations make such a position difficult to implement . . . and would result in increased costs to consumers with no benefits." Except, of course, their ability to reject Monsanto's biotechnological products.

But if there is a problem of informing the public about what they are expected to purchase and eat, then maybe the production of these foods in the first place is the real problem, and not labeling at all.

Since this session is on the subject of economic and structural issues, I must ask why it is that our culture is so loath to examine the structures of business. For myself, I find it necessary to focus on structures and institutions in order to properly frame the ethical and social issues, and I seldom use the language I was once trained to use. In fact, I was a little appalled when I pulled some old textbooks off my shelf and looked at them from my current perspective. They were terribly inadequate in the way they framed the questions and in their cultural bias — typical, I am afraid, of the chauvinism and imperialism of American culture at the time. But is it any different today?

The processes and products of agricultural biotechnology, as well as their human counterparts, are expressions of a particular historic culture: the culture of Enlightenment, Industrial Revolution and Reductionism Science. Biotechnology is an artifact of this culture. It is no more a universal outcome of evolution than our notion of science itself.

In fact, we might describe biotechnology as an apocalyptic remnant of the 19th and 20th century idea of Progress and Development — sustainable or not. Just recall the language you see in virtually every piece of literature on biotechnology: "improved" seeds, "superior" genes, "best" traits, and so on. Meanwhile, fewer and fewer people believe in the myth of progress — and those who still do are generally of the white northern business class — a rather small elite of the global population whose own children appear to be rejecting the idea.

Stripped of its emotive language, biotechnology would look like Swiss cheese — or the brain of a cow suffering from BSE!

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<sup>2</sup> "Plant Biotechnology — Harvesting Solutions for Tomorrow's World", produced by Monsanto Company in cooperation with The American Dietetic Association, 1995.

On the basis of its belief in a deterministic understanding of evolutionary progress, it is not surprising that our culture has taught us that there is only one valid epistemology, only one way to know about life and the world. We might well apply the term 'monoculture' both to the knowledge system of our rationalist, industrial culture, and to its practices, for example agriculture. Our notion of science and technology is, in fact, based on an epistemological monoculture. One might well add that sexism, racism, and nationalism are also expressions of monoculture. As in a field of hybrid corn, variation and differentiation are not welcome! They interfere both with the images we have come to accept as normative and with the production process. The model is still the production line. (You should see the difference in my garden and my daughter's — I have a hard time not planting in tidy rows, while hers is helter-skelter — herbs, flowers, and vegetables in glorious confusion.)

Lest you think I am being extreme, let me remind you that not very long ago the term "junk DNA" was used to describe what could not be explained: because it could not be explained, it was junk. Prions did not exist very long ago either, much less mutant prions that seem to cross species barriers on their own. And an article on the genetic blueprinting of yeast in the April 27, 1996 issue of *New Scientist* made the interesting comment that, "Sequencing the yeast genome has revealed a vast *terra incognita*. Biologists have no clue as to the function of 40 percent of the genes they have identified. Half of these enigmatic genes have DNA sequences similar to other, equally puzzling genes in fruit flies, mice, or other organisms, but half have never been seen before. Researchers have dubbed these genes 'orphans' because no one knows which gene families they belong to."

I suppose the common response is that we will soon fill in those blanks and complete our knowledge. But will this be the case, or only the case as we wish it to be? Unfortunately, we are all too likely to simply ignore (or eliminate or "disappear") what does not fit, or, for that matter, other ways of knowing.

I do not say this with malice. I, like most of you, grew up in an era and a culture of imperialism — only we called it "development". In this culture it has been assumed that everyone wants to, and could, become like us. And, of course, it has been assumed that we know how to make this happen. Agricultural biotechnology, as a reincarnation of the Green Revolution, and based on the same neo-Malthusian assumptions, is simply the latest artifact to be devised in pursuit of this goal. Monoculture is a perfectly reasonable phenomenon in this context. There is one goal, and one way to achieve this goal. Certainly the propaganda of industrial biotechnology expresses this monoculture.

But I have been taught by others, as well as by my own experience, which I refuse to invalidate, that there are always more ways than one to know anything and to do anything. It all depends on perspective, experience, culture.

Now we are faced with a profound contradiction in modern industrial biotechnology: the claims made for it are that it will enhance life, improve nutrition, increase biodiversity, and save the environment. Yet it seeks to achieve this through the violent manipulation of the very foundations of life.

If we look at the medical field, we see the application of biotechnology in the form of esoteric and heroic measures to defy death, almost exclusively on an individual basis. It is not vaccines for malaria or treatments for pneumonia or cholera that get the research — it's the transgenic animal organs for xeno-transplantation.

The director of the World Health Organization recently commented that “The optimism of a relatively few years ago that these [infectious] diseases could be brought under control has led to a fatal complacency.” The report that he introduced points out that diseases known for centuries are now popping up in incurable strains, many of them increasingly resistant to drugs as a result of “the uncontrolled and inappropriate use of antibiotics.” Making matters worse, the report points out, are modern methods of food production, such as the use of antibiotics in meat production to promote growth, but not in sufficient amounts to kill microbes, with the result that drug-resistant bacteria are then passed through the food chain to the consumer. “In the contest for supremacy”, reports the World Health Organization, “the microbes are sprinting ahead.”<sup>3</sup>

The advocates of biotechnology are quick to claim that what they are doing is simply more of what we have been doing for millennia — making bread and wine and cheese. In a sense they are correct. Biotechnology is just another expression of the drive to control not only the world around us (nature, or Creation), but also other people. It is fully in keeping with the attitude of Francis Bacon who, more than 300 years ago, as Sandra Harding points out so lucidly, used the sexual imagery of rape and torture to describe the proper scientific attitude toward nature.<sup>4</sup>

Technology, or technique, is a culturally embedded approach to acting on the world. It is a set of tools, particular tools that express cultural attitudes and values, such as speed, or taking things apart to see how they work. In the case of western industrial society, it is also a technology of domination and control, over nature, people, and life itself. Biotechnology is specifically the application of technology to life forms.

If we look candidly at the practice of biotechnology, we see violent intervention in the structures of life in order to reshape it according to our goals and purposes. In this respect, it can be said that biotechnology is engaged in a form of structural adjustment, but directed by Ciba-Geigy and Monsanto rather than by the World Bank and International Monetary Fund (IMF).

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<sup>3</sup> Toronto *Globe & Mail*, 5/20/96

<sup>4</sup> Sandra Harding, *The Science Question in Feminism*, Cornell University Press, 1986, p.116.

Applied to biology, however, structural adjustment is social engineering, and this should remind us of eugenics, that is, the deliberate selection of “superior” genes, organisms, people. What else can the constant talk about “improved” seeds and crops mean? Structural adjustment, whether in the lab of Plant Genetics System (PGS) or the board room of the IMF, is about selecting preferred structural characteristics and effectively disposing of those not considered desirable.

The purpose of structural adjustment is, after all, control. And in a market economy society this control is translated into profit and the accumulation of wealth.

In biotechnology and genetic engineering, then, we have simply taken what may be the final step in a logical process. We are now engaged in the redesign of life itself, with wealth and eternal life as the goals. (We might also describe this as an expression of the fear of death.<sup>5</sup>) We cannot, however, honestly say that we are trying “to enhance life” in general. It is only those with the money to buy hopes of immortality that are of interest to the market.

Look at current developments in genetic testing for cancer. While many social, ethical, and medical questions remain unanswered, including questions about the efficacy and interpretation of testing itself, companies are gearing up for large-scale testing for BRCA-1 and the more recently discovered BRCA-2, genes that “cause” or predispose to cancer. “Profits are expected to be huge. The cost of Myriad’s new test for BRCA-1 is going to be near \$1000 a patient, and this doesn’t include the cost of the doctor’s examination and counseling after the results come in,” according to an executive at Myriad Genetics. Myriad is itself gearing up to test 100,000 women per year.<sup>6</sup>

Speed kills. This has been a popular slogan to reduce automobile accidents. As in the case of the V-chip or the labeling of genetically engineered food, the slogan blames the victim, as it were, rather than putting the blame where it belongs in the first place, on the automobile manufacturers who build automobiles to go fast and sell them on the basis of performance, performance defined as acceleration and speed, or on the investors in the production of violence for TV.

Isn’t it exactly the same with biotechnology? One of the industry’s favorite justifications for biotechnology is the speed with which changes can be made and results achieved — on the assumption, of course, that this is inherently good. Speed is, after all, what comes with progress: faster aircraft, faster cars,

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<sup>5</sup> “Having directed so many life trends in North America for the past couple of decades, baby boomers are looking to dictate new terms for death, including its elimination. With their late first marriages, late parenthood, second careers, fitness fixations and pharmacological inroads on aging, many of them — and the social institutions that cater to them — seek to defy and deny the outrage of finite existence.” (*Toronto Globe & Mail*, 5/18/96).

<sup>6</sup> *Toronto Globe & Mail*, 7/5/96.

faster trains, faster communications of all sorts — and I just love e-mail! (Let's just ignore, for now, the contradiction between speeding fruit by jet from Chile to Canada while it has also been designed for longer shelf-life.)

Currently the biotech industry is making a great push to have its notion of the benefit of speed applied to the regulatory system. Quick approval has somehow become a desirable goal, a 'good thing'. 'You can't stand in the way of progress', we are told.

The Canadian Government's proposed revisions to the Environmental Protection Act are a good illustration of this. In its position paper the government stresses that it is "the new paradigm of global competitiveness" and "the ability to innovate and respond to new technologies [that] determines corporate success," and says that it "wants to ensure that we have a regulatory regime in place which . . . places Canadians at a competitive advantage."<sup>7</sup> What little it says about social or ecological health is strictly an addendum to competitiveness.

I do not think that a cynical response is out of order. If the regulation of biotechnology is subject to such mindless criteria, we will indeed be able to say that 'speed kills' — but it will be too late. The point of a regulatory process is not speeding new products to market in the name of global competitiveness. It is sanity and health — not the health of the market or the corporation, but the health of the society and all life.

Unfortunately, industry seems to see itself as above and beyond society, and its corporate health as achievable without public benefit or control. As a result, we see industry engaged in blackmail, in Germany and other jurisdictions around the world, saying that if the regulatory process is not liberalized and speeded up, it will take its business elsewhere. So now we are in a game of competing globally to see who can get away with the lowest standards. It is genuinely frightening!

The second characteristic of biotechnology is supposedly the precision of its processes. The industry makes much of this precision, although many practitioners deny it exists. Even if the precision is real, we must still question its value; after all, it is precisely the lack of precision that makes it possible for organisms to evolve and survive.

What is more interesting, however, in terms of the structural issues we should be addressing, is the fact that both speed and precision are characteristics of process, not product. So we are faced with this contradiction: the industry claims it is the process which makes the products of genetic engineering superior to traditional plant breeding, then turns around and says that as far as regulation and labeling are concerned, it is only the product that counts.

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<sup>7</sup> CEPA Review: The Government Response, Ottawa, 1995, p.5 & p.51.

Let's look more closely at this process-product issue, because it is present at every level, from *Codex Alimentarius* to the City of Toronto's Food Policy Council.

I think the biotechnology industry is right to resist the labeling of foods as products of biotechnology. They know the public concern, and they know that the public does not make the process/product distinction that the industry would like them to. Why should the public make this distinction? In Ontario, for example, kosher dairy products have been on the market for quite a while, labeled as such. And halal is also recognized. Yet when a very substantial group of organic dairy farmers wanted to market certified organic dairy products, the Ontario Milk Marketing Board fought them all the way, saying they could not make an exception to the rule of monoculture. The OMMB lost, and organic milk is now on the Ontario market and doing very well. The underlying concern here was well expressed by the exasperated comment of a western beef rancher: "What am I, inorganic?" It is assumed that the organic label indicates a superior product. This is acceptable when the group for whom the product is superior is small or marginal (Jews, Muslims, people allergic to peanuts), but it becomes terrifying when the assumed superiority has a more general appeal as a more wholesome, less high-tech or manipulated food.

The recent meeting of the labeling working group of *Codex Alimentarius* in Ottawa had to wrestle with this process/product issue: on its agenda was the labeling of halal, kosher, organic, and biotechnology foods. All are process issues, but not much headway was made on the biotech issue because there was no agreement to proceed on the basis of the U.S. position that how a food is created, grown or processed is irrelevant — at least in the case of biotech foods.

In the FDA interview cited earlier, in response to the question, "What values will these genetically engineered plants have — more nutrients, better taste?" the FDA spokesperson had an honest response: "Right now, it's more a matter of giving fruits and vegetables better shelf-life and shipping properties." In food production, genetic engineering is being applied primarily to the industrial commodity crops: tomatoes, corn, oilseeds, soybeans, potatoes and cotton. These are not crops that are in short supply or that need, as the industry calls it, improving. And what has been done to them is to make them more amenable to monoculture industrial production — regardless of what the companies might say about nutrition and the environment. These crops are being adjusted structurally in order to provide greater sales and profits for a very limited number of very large transnational corporations — corporations that are getting fewer in number and larger every day. (The merger of Ciba-Geigy and Sandoz into Novartis is just the latest and largest. Monsanto, meanwhile, is busy with another kind of expansion, having taken control of Gargiulo and Calgene in recent months.)



Even the World Bank is getting concerned. An agricultural specialist with the bank recently warned a Saskatoon audience that biotechnology might start avoiding research of public value, but little private profit. “Who is going to make the public good investments in fundamental research to agriculture?” Alex McAlla asked.<sup>8</sup>

At the same time, there is another sort of structural adjustment going on. One begins to realize that ‘jobless recovery’ and ‘downsizing’ and a whole lot of other euphemisms are really telling us that the corporation is no longer interested in production. It is not sales that count, as a look at the way *Forbes’* magazine rates companies reveals. What counts is equity and return on equity, dividends, and increases in share value. These are all expressions of what is now being heralded as “shareholder value”. Another expression of this is the preoccupation of business with the financial markets, that is, those markets where the trading is not done in real commodities, things that people can actually eat or use to keep warm, but in invisible or imaginary commodities, such as derivatives that are based on the movement of stock indices or currency exchange rates.

If we are honest about it, we must conclude that, as presently practiced, biotechnology is going to offer nothing to the subsistence farmer anywhere — except perhaps lower prices for what little surplus he or she may try to sell. What it promises is greater ‘shareholder value’ for wealthy northern investors, much of this to be derived from the value-added activities of everyone from the biotechnologist to the further-processor. But this shareholder value is simply an extraction or transfer of wealth that has nothing to do with social benefit, personal well-being, or even nutrition.<sup>9</sup>

In the case of food, value-added is used to describe anything that might provide an opportunity to increase the selling price of a product, from simply washing potatoes instead of selling them covered with mud to turning them into pre-cooked frozen french fries, or what’s worse, reprocessed, cooked, and canned “Pringles” (now P&G’s biggest export product). And in practice, value-added largely means nutrition-subtracted.

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<sup>8</sup> Working Paper:23/5/96 .

<sup>9</sup> “Imperial Oil aims to boost shareholder value” was a recent newspaper headline: “Imperial Oil is considering a number of moves to boost shareholder value, including buying back a large chunk of stock or paying a special dividend... Investors believe the company’s managers will take bold steps to enhance the value of its stock. A large buyout would have that effect, as it would dramatically increase demand for the stock. At March 31, Imperial, Canada’s largest integrated oil company, had \$2 billion in cash and marketable securities, with \$1.8 billion in debt. In 1995 it earned \$514 million on revenue of \$9.4 billion.” (*Globe and Mail*: 5/14/96) .

When I butchered the lambs we had raised, I did not consider that I was adding value. I was, first of all, taking a life. Second, I was putting that animal in a more attractive and convenient form for human consumption. I was not adding value to the meat of that lamb as a delicious and nutritious food.

Another example from my experience as a sheep farmer. We found it necessary, for our survival, to organize a cooperative. It was a non-share capital, farmer owned and operated co-op that took charge of marketing lambs for the sheep farmers of Nova Scotia on a voluntary basis. That is, there was no legal compulsion or authority in what we were doing. What we did, in fact, was gain control of lamb marketing — from the farmer through delivery to the supermarkets. We had to concentrate power and control in order to gain a reasonable return on our labor. Not to make a profit, not to make a return on our capital, and not to increase shareholder value for the co-op, but to hopefully make a living wage.

The application of biotechnology to food is often described as 'adding value'. I can see the added cost aspect of it, particularly given the new emphasis on intellectual property rights, though the speed of new product development is outrunning the patent process. However, I have yet to see any indication of the added nutritional value that the industry uses as a selling point, particularly with gullible health professionals and their organizations, such as the American Dietetics Association (ADA) and Canadian Dietetics Association (CDA).

So when we look at agriculture, and at that application of biotechnology to agriculture, we readily see that it is not about feeding the hungry of the world, or even the growing population of the world, in fact. Nor is it even, really, about feeding the growing appetites of the growing global middle class. What it is about is making more money for corporations out of what is already being produced. We are, in fact, in the midst of a massive structural adjustment for the simple purpose of increasing shareholder value.

We are fond of referring to this new economy as an information economy, and noting that DNA is merely a form of information, which can be manipulated for profit just like other forms of information. Considering the global economic structural adjustment I have been describing, I think it may be more accurate to describe this as a post-production economy. I leave you with that thought.