

13 | 'Let them eat cake': GM foods and the democratic imagination¹

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Prologue

BioVision, Lyons, 26–29 March 1999. A French city long considered a mecca for food enthusiasts hosts a meeting ambitiously billed as a Davos for the life sciences, a place where political leaders, industrialists, pioneering researchers, consumer advocates and environmental groups gather to discuss the future of biotechnology. Contrasts abound. Inside the conference centre, the opening plenary features such luminaries as the Nobel laureate biologist David Baltimore, the newly appointed head of the World Health Organization, Gro Harlem Brundtland, and Europe's research commissioner, Edith Cresson, who concedes nothing in her defiant bearing of the indiscretions that forced the European Commission's extraordinary *en masse* resignation just a week before. Outside, Greenpeace demonstrators mount a protest, controlling visual if not verbal space. Inside, at the generously laden refreshment tables provided by leading biotech firms, a sardonic Eurocrat I have known for years tells me to beware: there may be genetically modified (GM) ingredients in the food, he cautions. Apparently he assumes that a critical academic observer of modern biotechnology must, by that very stance, align herself with the anti-GM forces of the world. In the evening, the distinguished guests are bused to City Hall for the *de rigueur* municipal reception, but their way is barred by fierce-faced radical farmers with trailing banners, demonstrating against GM crops; '*Minotaure sème la mort*', they chant. Freezing in a thin drizzle, the dignitaries wait impatiently until a half-hearted contingent of Lyons' finest arrives to smuggle them in from the cold through an unblockaded side entrance. It is a strangely contentious backdrop for unveiling biotechnology's newly benign image – as dispenser not of questionably safe and marginally useful 'Frankenfoods' to rich Western consumers, but of products that will help nourish the world's poorest and most needy citizens.

'Golden Rice' (Guerinot 2000) in particular – so named because its bio-engineered capacity to produce beta-carotene, which converts to vitamin A in the human body, gives the grains a pale carrot hue. This innovation, it is claimed, will help solve the severe problem of infant blindness afflicting hundreds of thousands of malnourished infants throughout the developing

world. An Indian scientist puts the case with conviction. In India, he suggests, Golden Rice will easily be assimilated into local food customs that have already made a special place for grain of this colour. Tinted and scented with saffron or turmeric, served at weddings and other celebratory occasions, yellow rice in India is the edible embodiment of the smile of fortune. Now, the gene engineer's prowess can improve on the ancient craft of cooking with spices. Bio-engineered Golden Rice, its colour bred in the grain, is poised to take its place in the sun, perhaps heralding a change of fortune for the beleaguered food biotechnology industry. Or will it?

As we turn to this question, let us keep in mind the complex choreography of the Lyons meeting, with its cross-cutting lines of politics, knowledge and discourse: farmers and environmentalists on the outside, scientists, bureaucrats and academics on the inside – all speaking different languages to be sure, but all joined none the less in a dance of engagement with the same set of issues, expressed through stylized gestures (talks, chants, banners, blockades, receptions ...) that need no translation to be mutually intelligible. There is in Lyons a thick politics of biotechnology, but are the resources for conducting it as widely distributed as the technology's proponents hope their seeds will be one day?

Seeds of controversy

While industry representatives enjoyed the media buzz around Golden Rice, their new 'poster crop' for genetic modification, a substantial backlash was also forming. Vandana Shiva, India's celebrated feminist critic of biotechnology, was one of the counter-movement's most outspoken leaders. In an electronically distributed article in 2000, Shiva labelled Golden Rice a 'hoax' and charged the advocates of the technology with making a slew of false and unfounded claims about it: overstating the rice's nutritional benefits; failing to account for its total impact on individual and family diets; overlooking the logistics of food supply in poor countries; ignoring more traditional sources of vitamin A; threatening rice biodiversity; and establishing corporate monopolies on an essential food grain by patenting each trait of the product, as well as the processes for manufacturing it (Shiva 2000).

Reaction to Shiva's report made it clear that the sponsors of Golden Rice did not dismiss her claims as irresponsible technophobic ranting. Indeed, her analysis called forth a measured response from Gordon Conway, president of the Rockefeller Foundation, an early funder of research on vitamin-enriched rice. Replying to a request for comments from Greenpeace, Conway readily conceded that Golden Rice was not 'the solution to the vitamin A deficiency problem', but rather only a complement to

a balanced diet containing other sources of vitamins. He also agreed with Shiva that the media campaign around the product had gone too far, seeming to forget that 'it is a research product that needs considerable further development' (Conway 2001). At the same time, Conway emphasized the central theme from the standpoint of the Rockefeller Foundation: there is no reason not to make rice, a staple of the developing world, into a more nutritious food, and if conventional breeding techniques are not up to that job, then genetic manipulation is surely fair game. No surprises here, given the foundation's long history of involvement in the agricultural applications of the life sciences. In an earlier era, the Rockefeller Foundation had harnessed a nascent molecular biology to lay the basis for the Green Revolution (Kay 1993). Support for engineering micro-nutrients into rice, thereby launching the next agricultural revolution, continues the same policy by other means.

Shiva's attack and Conway's rebuttal touch on several salient themes in contemporary debates about biotechnology – in particular, food safety and security; product promotion and media hype; intellectual property and indigenous knowledge; the role of multinational corporations; and post-colonial power relations among developed and developing nations. Familiar battle lines have been redrawn with reference to the merits and demerits of this particular technological application. The quarrel extends to the desirability for the world of an agriculture built on GM.

The 'case study' aspect of the Shiva–Conway exchange is striking, though not perhaps surprising. Immediate, colourful, consequential and polarizing, the case of Golden Rice understandably captured the attention of biotechnology's critics and defenders. The product became a convenient focal point for long-standing ideological conflicts. As a staple food product of the global South, Golden Rice is a particularly useful resource for symbolic politics: it serves both the narrative of progress and beneficence associated with modern biomedicine and the narrative of appropriation, manipulation and dominance favoured by anti-globalization forces. But narrowing the focus in this way has proved problematic for biotechnology critics in much the same way as the case study method tends to be for social analysts. The particular siphons critical attention away from the general. Deeper theoretical perspectives on what is at stake in the politics of biotechnology – more specifically, what is new and debatable about the politics of engineering *life* – tend to get lost in the noise about the individual application. The issue is posed in reductionist terms, as if whether or not to create a particular product through genetic modification is the most important question.

Of course, the product-specific debate also stands in for older, ongoing