Food, citizenship and democracy: Contested representations of GMOs

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Abstract

Within the context of the international restructuring of agrobusiness, this paper explores the interplay between representations of Genetically Modified Organisms (GMOS), shifting conceptualisations of citizenship and the human right to food. Competing cultural representations of nature, culture and the role of science are identified as key to promoting new forms of citizenship that revolve around production, consumption and access to food. Increasingly, these re-articulated forms of citizenship are being realised through participation in local grassroots social movements. As an example of this process, this paper discusses how such movements have responded to the alleged presence of genetically modified corn in Mexico. In this nation's South, local knowledge and the re-appropriation of scientific practices has been popularised to promote democratic forms of citizenship tied to shared cultural practices and traditions, rather than the nation state. This is indicative of the ways in which representations of biotechnology are increasingly impacting on the identity, traditions and democratic practices of people worldwide.

Contemporary debates relating to global food production are produced within the framework of an international restructuring of agribusiness, which revolves around shifting economic approaches, fears raised about future food security, concerns over the expansion of intellectual property rights, and the growing use of biotechnology and its implications (see Latour, 1993; Shiva, 1997; Brush, 2001; 2007). More broadly, these debates are often focused on shifting conceptions of nature and culture and the place of science. This is particularly apparent in relation to biotechnology and the production and distribution of genetically modified organisms (GMOs). Indeed, as Levidow and Tait point out "the GMO debate abounds with culturally resonant metaphors about nature being out of control—or under control of different kinds" (1995, p. 123). Various articulations of the dominant discourses of health (revolving around the fulfilment of nutritional needs and concerns about the risks of eating genetically modified foods), environmentalism (concerned with threats to biodiversity and the impact of increased pesticide use) and rights (of technoscientists, farmers and indigenous people to use and profit from plant breeding and the human right to adequate food) have been used by both those advocating the use of GMOs and those working to prevent them from entering the mainstream food supply.

Within these debates, the contestation of knowledge between so-called scientific experts and lay people (often organising themselves into grassroots movements), most notably articulated through notions of risk, remains a dominant trope. As Wynne (1996) notes, traditionally, there has been little appreciation of the contributions to knowledge

that non-experts can make to scientific/environmental debates. Indeed, building on the work of Latour (1993), Wynne works to destabilise the normative narrative of science noting that:

> [s]cience imbues natural categories with culture, and scientific–technical networks are built with a richly heterogenous hybridisation of the natural, human and artefactual. But then this human achievement is purified of its human content and defined as only natural, to the disorientation of the social world and its concepts of responsibility and agency. (1996, p. 73)

Much work has been done to re-invest the implications of human involvement in, and representations of, scientific and natural processes, as exemplified by Ulrich Beck. Beck observes that " . . . nature itself is not nature: it is a concept, a norm, a recollection, a utopia, an alternative plan", going on to make clear that he sees these understandings of nature as '*cultural concepts*'" (1996, p. 21). However, whilst the traditional, romanticised divide between nature and culture has been significantly destabilised in academic debate over the last few decades, we see in the campaigns against GMOs that these tropes—these cultural concepts—continue to inform the relationships many people construct between themselves, the landscape, and the foods they produce, purchase and consume.

These campaigns, in both the global north and south, call upon notions of purity, traditions and harmony in their efforts to prevent contamination with "violated" foods that are seen to pose an unknown threat or risk to those who grow and consume it. In her study of media coverage of the campaigns to keep genetically modified foods out of the United Kingdom, Hughes identifies how this risk was emphasised by extrapolating it from the individual to the nation state. She notes that genetically modified crops were represented as "not just a threat to the environment and people's health, rather they were a threat to *Britain's* environment and to *Britain's* health" (2007, p. 318). Such discursive manifestations facilitate the identification of British countryside as unique, the purity of which must be preserved (Hughes, 2007, p. 329). This link to nationality also provides a link to citizenship—to the way in which people identify with the nation and its ability to uphold their rights.

However, in recent years we have seen a destabilisation of the nation state as the locus of citizenship, with the rise of ideas such as environmental citizenship and, more recently, the emergence of conceptualisations of food citizenship. As Jelin points out, " . . . although the ideas about citizenship and rights have been grounded in the notion of the modern nation-state, there is no intrinsic necessity that this be so: the public sphere might be 'smaller' or 'larger' than the state, or may even be different" (2000, p. 53). The terrain of these new forms of citizenship is still being mapped, but many are proposing definitions: Wilkins writes that:

> food citizenship, in my view, is the practice of engaging in food-related behaviours (defined narrowly and broadly) that support, rather than threaten, the development of a democratic, socially and economically just, and environmentally sustainable food system. (2004, p. 271)

Others critique the idea that practices of production and consumption (i.e. of food) can be foundational platforms for practices of citizenship. DeLind, who has written extensively in support of civic agriculture, articulates this position, which she supports by drawing on the work of Gabriel and Lang:

> What this vision of . . . citizenship lacks . . . is any wider notion of social solidarity, civic debate, coordinated action or sacrifice. It individualizes the idea of citizenship, as if becoming a citizen is a matter of individual choice alone. In this way, citizenship becomes a lifestyle,

> however, praiseworthy and necessary, which can easily degenerate into tokenism and is hardly likely to alter the politics of consumption. (cited in De Lind, 2002, pp. 218-19).

Citizenship and the right to food

However, despite such concerns, increasingly issues revolving around food (including GMOS) are being tied to notions of citizenship. Whilst, as Wilkins highlights, "citizenship carries duties or responsibilities along with various rights" (2004, p. 269), these new forms focus on the aspect of rights, notably the fundamental human right to food—a right that is increasingly being enshrined in constitutional law in nation states worldwide, particularly those in the global south. The definitive establishment of food as a fundamental human right enshrined within international law can be found in the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR), which expands on the right to food that was first identified in article 25 of the 1948 United Nations Declaration on Human Rights. It is dealt with in two parts in article 11 of the International Covenant on Economic, Social and Cultural Rights: firstly, the right to "adequate food" is explicitly identified as a core component of the "right of everyone to an adequate standard of living"; and, secondly, the right "to be free from hunger" is asserted and the means to achieve this are outlined in two steps that focus on issues of "production, conservation and distribution". Within this document, access to adequate food is overwhelmingly constructed as a production and distribution issue, with an emphasis on promoting reform within these systems to ensure maximum yield and access to food. Through attention to these two issues, it is assumed that the "inherent dignity of the human person" will be maintained.

In 1999, the principal focus on issues of production and distribution were re-articulated by the Committee on Economic, Social and Cultural Rights (CESCR), which oversees the International Covenant on Economic, Social and Cultural Rights, following a series of international gatherings convened in response to calls for clarification of article 11 at the 1996 World Food Summit. Indeed, the document produced by the Committee on Economic, Social and Cultural Rights, the General Comment 12 on the right to adequate food, identifies the issue of appropriate access as the key impediment to the fulfilment of this right. Within this document, the right to food is defined as the right of everyone to have "physical and economic access at all times to adequate food or means for its procurement". However, it is the issue of what constitutes adequate food, and, thus, how this basic human right can be met, that is of concern here. The General Comment 12 acknowledges the difficulties in defining the term and the need for flexibility and contextualisation, stating that "[t]he precise meaning of 'adequacy' is to a large extent determined by prevailing social, economic, cultural, climatic, ecological and other conditions . . ." Here, for the first time, the central role of culture in determining the fulfillment of this human right is acknowledged in the assertion "that the core content of the right to adequate food implies: The availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture . . ."

However, the definition of "acceptability", or how it should be assessed and/or determined, remains unclear. This is particularly true in relation to cultural acceptability of genetically modified food—here it is not simply the variety or mode of preparation of these foods that is represented as problematic, but their very genes. We have seen, in respect to the European Union and its efforts to exclude genetically modified foods, that the issue of cultural acceptability has been very difficult to maintain

in the face of contemporary neoliberal economic approaches. The European Union's stance on GMOs has been found by the World Trade Organisation to be protectionist, rather than based on legitimate concerns about health, biodiversity and cultural traditions (Castle, 2006). This is in spite of the General Comment 12's concession that

> *[c]ultural or consumer acceptability* implies the need also to take into account, as far as possible, perceived non nutrient-based values attached to food and food consumption and informed consumer concerns regarding the nature of accessible food supplies.

The issue of the cultural acceptability of food is, of course, not only apparent in the developed world. Writing on the growing resistance to genetic modification in India, Mitall points to the 2005 participation of over 3000 women in seed satyagraha, or non-violent resistance, in the Indian state of Orissa (2006, p. 34). Here, "[a]round the bonfire of hybrid and genetically modified seeds of cotton and other crops, they shouted slogans damning the GM seeds and the high-yielding crops that have pushed them into poverty, indebtedness and hunger" (2006, p. 34), calling for Orissa to become an organic state. Similar forms of resistance are occurring in Southern Mexico. In 2004, hundreds of Mexicans marched through Oaxaca City chanting, "*Fuera Semillas Asesinas* (get those killer seeds out of here), in response to the alleged discovery of genetically modified cultivars in the region"s corn plots. This protest is representative of the numerous coalitions that have sprung up across Mexico to resist the arrival of genetically modified corn, beginning with the gathering of representatives of civil society (largely environmental and indigenous rights groups), coming together for the First Forum in Defense of Corn in 2002 and gaining expression today largely through participation in transnational organisations such a Via Campesina and the Indigenous Peoples Council on Biocolonialism. Zambia's rejection of genetically modified food aid during 2002, when around 14 million people in Southern Africa were at risk of starvation (Mwale, 2002, p. 89), sparked international controversy. Whilst this event is usually represented as a product of the United States–Europe standoff over genetically modified food (Zerbe, 2004), little consideration has been given as to whether this food was culturally acceptable for Zambians.

Central to all of these resistance struggles, and bound up in all of the three key discursive modes (health, environmentalism and rights) through which the GMO debate is realised, is opposition to economic rationalist approaches to managing the world's genetic resources. This is largely articulated through representations of nature as a common good rather than a commodity that can be bought and sold. These arguments centre on the expansion of intellectual property rights to cover biological resources through the World Trade Organisation's Agreement on Trade Related Aspects of Intellectual Property. This has raised concerns that the traditional practice of seed-saving, which forms the basis of agricultural practices in many parts of the world, particularly in the global south, is under threat. This is a matter not only of the cultural acceptability of food, but of its very source. Seeds resonate with varied cultural traditions and practices around the world. Indeed, Donna Haraway notes that "[s]eeds are brought into being by, and carry along with themselves wherever they go, specific ways of life as well as particular sorts of dispossession and death" (1997, p. 89). She goes on to assert that they are embedded with their "apparatus of production and sustenance", which "includes genetic manipulations, biological theories, seed genome testing practices, credit systems, cultivation requirements, labour practices, marketing characteristics, legal networks of ownership, and much else" (Haraway, 1997, p. 89).

Haraway aims to destabilise the nature–culture and scientific–political dichotomies (1997, p. 89). For her, the debates over the production of scientifically-manipulated seeds, and biotechnology more broadly, which rest on notions of natural purity versus corrupted, manipulated, violated technoscientific products, are filled with "the unintended tones of fear of the alien and suspicion of the mixed" (1997, p. 61). She sees in these debates a fear of the other and, thus, the supremacy of particular modes of being—of particular types of people and goods—of particular cultural tastes. To extrapolate, Haraway's work could be read as critical of the "cultural/consumer acceptability" component of the right to food. The realisation of such particular tastes may serve to reinforce negative associations of those "not like us"—of those with different tastes, of those whose food and, no doubt way of life, could be classified as inferior. Exercising this degree of judgement may reinforce the fear of the unknown, fear of the other or fear of any form of hybrid. It may also reinforce particular cultural conceptions of nature as being immutable and innate. However, notions of the cultural relativity of taste have generated a significant amount of food-based politicisatiation, and prompted re-conceptualisations of citizenship, through the development of worldwide networks of grassroots movements. As Welsh and MacRae note, "[f]ood, like no other commodity, allows for a political reawakening, as it touches our lives in so many ways . . . from the intimacy of breastfeeding to discussions at the World Trade Organization" (cited in Levkoe, 2006, p. 90). The following section explores this process through a brief discussion of the ways in which grassroots movements revolving around corn in Mexico are responding to the international restructuring of agrobusiness, specifically in regards to the spread of GMOS.

Mexico, corn and GMOs

As discussed earlier, there are a number of local grassroots organisations in Mexico coalescing around food. These movements have gained momentum recently with the approval within the Federal District of Mexico of the *Law on Food Security and Nutrition.* The approval of this law, however, is indicative of the lack of national reforms in Mexico. Indeed, many of the food-based struggles in Mexico continue to advocate for a re-articulation of the agricultural chapters of the North American Free Trade Agreement (NAFTA), with a key focus for many being corn, the nation's staple. Since the North American Free Trade Agreement came into effect on 1 January 2004, foreign corn has entered Mexico in larger quantities than ever before. Mexico's acceptance into the North American Free Trade Agreement also required alterations to the nation's Constitution to make all land and property open to commercial sale (Castells, 1997, pp. 74-75). This necessitated a retraction of the legal protection of indigenous rights to *ejidos* (communal agricultural land), a right fought for and won during the decade-long Mexican revolution which began in 1910. These were rights which, according to Carrigan, "embodied the Mexican State's most sacred pact with the indigenous population" (Carrigan cited in Pelaez, n.d.). The neo-liberal agenda epitomised by the North American Free Trade Agreement also brought about the deregulation of the price of tortillas in 1999, the main form in which corn is consumed in Mexico. Over the ensuing decade the price or tortillas has spiralled out of control on numerous occasions prompting government intervention.

The influx of foreign corn into Mexico has not help stabilise this situation, as most of it is destined for animal feed. In fact, its introduction has fuelled a new problem: 30–50 per cent of the foreign corn is genetically modified (Informa Economics, 2004). To avoid

contamination of traditional corn varieties, in 1998 the Mexican Government placed a moratorium on the cultivation of genetically modified corn outside of laboratories. However, in March 2009, the nationwide ban was reversed, allowing for experimental cultivation of genetically modified corn crops. While the government has vowed to protect native corn varieties, there is a growing body of evidence that genetically modified contamination has already occurred. In 2001, David Quist and Ignacio Chapela from the University of California published a paper containing evidence that transgenes from genetically modified corn exist in the corn fields of southern Mexico. The veracity of these findings has been disputed, and the journal, *Nature*, in which they were published removed its support for the publication citing "diverse advice received" (McAfee (2003, p.23) characterises this as "less than a 'retraction'"). However, in a new twist, early in 2009, the findings of Quist and Chapela were supported by a study that, once again, found evidence of genetically modified contamination in native corn crops in the state of Oaxaca, in the same region in which the 2001 study was carried out (Piñeyro-Nelson et al., 2009).

Yet, whether or not genetically modified corn has infiltrated traditional strains, the discursive damage has been done. Indeed, many Mexicans, particularly indigenous groups in the nation's southern states of Oaxaca and Chiapas (importantly, this includes members of Zapastisa communities), see genetically modified corn as a threat, not just to their economic viability, but to their way of life and food sovereignty. In regards to biotechnology and genetic modification, as outlined above, Haraway objects to the notion of linking nature with purity, arguing that "[i]t will not help—emotionally, intellecutually, morally, or politically—to appeal to the natural and the pure" (1997, p. 62). However, the issue of genetically modified corn in Mexico is not simply a debate about genetic purity and contamination because, as McAfee points out:

> Mexican maize landraces in even the most isolated mountain plots are far from "pure": maize genetic erosion long predates genetic engineering, and most Mexican *ejidos* and indigenous communes are already drawn into transnational circuits of exchange and accumulation and of cultural transformation, not all of it unchosen or unwelcome. (McAfee, 2003, p. 19)

For many indigenous and rural Mexicans who cultivate corn, the debate over genetically modified products revolves around the broader issues of food sovereignty in terms of agency, economic control and neo-colonialism. However, it is also about its connections to ways of life and identity. These elements are particularly threatened by the speed with which the genetic makeup of their grain could change.

Many people in Mexico's South, disenchanted with national acceptance of biotechnology and resistant to the claims of scientific experts who also support technoscience as a means to assure food security in the developing world, have initiated local efforts to protect their corn, largely through seedbanks. One of the most significant of these is the Zapatista community initiative, Mother Seeds in Resistance from the lands of Chiapas, which was established in 2002. Genetically modified corn fails the cultural acceptability clause of the right to food for these people. This is true particularly of genetically modified seed, which is inscribed, as Haraway notes, with "specific ways of life as well as particular sorts of dispossession and death" (1997, p. 89). For these indigenous Mexicans, genetically modified corn constitutes a direct affront to their ways of life. This is further problematised by local fears that agricultural biotechnology corporations, such as Monsanto, may attempt to patent varieties of indigenous Mexican corn in their efforts to produce genetically modified seeds capable of doubling their yield by 2030 (Pollack, 2008). Furthermore, fears remain about the potential integration of

Terminator technology into these corn strains, despite Monsanto's declarations that this will not occur. Such technology renders seeds sterile after their first harvest, preventing the practice of seed saving and passing down, which is practised by farmers all over the world. Not only is such technology constructed amongst these groups as an attack on traditional practices, but it is also seen to threaten biodiversity and to enable corporations to play an increasingly large role in controlling the world's food production.

Instead of trusting scientific experts to protect their corn, grassroots movements coalescing around corn in Southern Mexico are engaging in local practices that value local knowledge and the re-appropriation and localisation of scientific practices. With the support of national and international civil society, rural indigenous Mexicans have initiated independent testing of their corn for evidence of genetically modified contamination. This is indicative of a re-focusing of energies on local community strategies, such as education programs, to inform both the cultivators and consumers of the potential threats of genetically modified corn. Whether or not genetically modified corn exists in Southern Mexico, it is feared by locals. Mexico is the birthplace of corn. Historically, the genetic biodiversity of the plant has been protected under the guardianship of indigenous farmers in their small hillside milpas (corn plots). Prior to the alleged discovery of genetically modified corn in the nation, the genetic variability of corn was already under threat due to a reduction in small-scale corn cultivation brought about by the industrialisation of the Mexican economy and via the introduction of hybrids (Salvador, 1997). This is of particular concern because Mexican corn is used extensively in the global south to produce varieties capable of ensuring adequate food production for the poor.

Traditionally, maintenance of the biodiversity of corn had, in part, been facilitated by its small-scale cultivation carried out by diverse indigenous groups (Nadal, 2000). Through their tradition of seed selection, passed down from generation to generation, members of these groups are able to consistently produce genetically diverse plants which adapt to and grow in many varied conditions. The arrival of genetically modified corn is represented amongst these communities as an attack on this way of life. The movements coalescing around corn are seeking to secure their rights to culturally acceptable food, and are, in the process, promoting new democratic forms of citizenship tied to shared cultural practices and traditions, rather than the nation state.

Conclusion

> Genetic Sciences and politics are at the heart of critical struggles for equality, democracy, and sustainable life. (Haraway, 1997, p. 62)

Local knowledge and understanding of the cultural acceptability of food continues to be devalued in debates about GMOs. Instead, competing representations of nature, culture and the role of scientific knowledge continue to shape the discursive landscape. Increasingly, we are seeing the struggle over GMOs articulated in terms of human rights and democratic rights. In response to this, an increasing number of grassroots social movements are developing, which are centred on food and its sociocultural, economic and environmental relationships. These movements promote new forms of citizenship that move beyond the nation state. These are forms of citizenship which demand recognition of local knowledge, practices and traditions and, often, contest expert scientific opinion.

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