MAKING THE MARKET “SAFE” FOR GM FOODS: THE CASE OF THE CANADIAN BIOTECHNOLOGY ADVISORY COMMITTEE

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Introduction Since the development and commercialization of recombinant bovine somatotropin (also known as recombinant bovine growth hormone and rBST) and the Flavr Savr tomato, genetically modified (GM) foods have become an increasingly ubiquitous reality, particularly in the United States and Canada. The advent of these foods has brought persistent controversy. Public concern and opposition has preceded and followed GM foods from fields to shelves, highlighting a wide range of issues, including an often intersecting mix of environmental, human health, and ethical worries, as well as fears that commercial biotech will lead to further rounds of consolidation in the farm and agrofood sectors. Increasingly, these are international issues, attending both the adoption of GM crops by farmers in more and more countries, as well as transborder trade in GM crops, animals, and food products.

These concerns are not new, and have prompted considerable academic, policy, and popular debate. Neither, however, do they appear to be going away even as commercialization proceeds. In fact, the very persistence of this suite of concerns highlights the inherently contentious project of transforming and commodifying life forms by means of the new biotechnologies, a project whose politics has been referred to as an “Achilles heel of the globalization regime.” Political opposition to GM crops and foods, particularly in North America and Europe, is linked to a growing suite of consumer concerns about food safety including Creutzfeld-Jacobs (aka Mad Cow)
disease and the United Kingdom’s foot-and-mouth disease outbreak. All highlight the political vulnerability of food systems arising from the “intimacy” of food as a commodity, necessarily juxtaposing culturally loaded and “embodied” acts of ingestion with the seemingly faceless production and circulation of capitalist commodities.

In this context, liberal states seeking to regulate GM foods face something of a problem. On the one hand is the apparent need to deal substantively and democratically with consumer concerns via the development of regulatory systems governing the health and environmental impacts, along with the ethical implications of commercial GMOs and GM foods. On the other hand, these states face pressure from various combinations of “producers” (agricultural firms, biotechnology companies, and food growers) to support and sustain profitability in domestic and international markets, to assuage public concerns, and to keep regulatory “burdens” at a minimum. The dual imperative of responding to both consumer and producer pressure is a particular dilemma in those nations that have been “first movers” in the commercialization of GM crops and foods, often actively supported by state policies. National governments in the United Kingdom, the United States, and Canada, for instance, have long supported GM technologies in the name of sustaining and buttressing national economic competitiveness in a critical, high-tech sector, the commercial success of which is considered integral to economic success and comparative advantage in the post-Fordist era. In these countries, the development of regulations in response to consumer, environmental, and ethical objections has taken place in significant measure after commercial deployment of agricultural biotechnologies is already a fait accompli. This makes the problem of responding meaningfully to consumer concerns both unique and problematic. In particular, the problem may be posed in terms of how individual states balance twin and potentially conflicting imperatives, on the one hand by continuing to support industrial innovations in ag-biotech and the commercial deployment of GM varieties and foods, and on the other hand, by responding substantively (and democratically) to concerned citizens.

In this paper, we examine the tension between these contending imperatives via a review of GM food regulation in Canada by the Canadian
Biotechnology Advisory Committee (CBAC) between 1999 and 2003. Amidst growing controversy surrounding GM crops and foods, attendant with the emergence of commercial biotechnology in Canada, the CBAC was created in 1999 as an expert panel advisory to the Canadian Government under the auspices of the Canadian Biotechnology Strategy (see Figure 1). Included among the wide range of biotechnology-related issues examined by the CBAC was a review of the regulation of GM crops and foods, termed the “Regulating GM Foods in Canada Project.” Reflecting the dilemma cited above, CBAC described the project as being intended to “identify improvements in the structure and function of the regulatory system that would position it to successfully meet current and future challenges,” but also to examine how “to capture the benefits of biotechnological innovation while providing reasonable protection against potential harms.”

Through this case study, we echo the concerns of many environmental and citizen groups in Canada (many of which boycotted the project’s public consultations) that have been critical of the CBAC and the GM foods project in particular. We argue that the CBAC GM foods project was, at best, a poorly conceived effort to engage with and respond to public concerns about GM foods, compromised by a prior commitment to commercialization. At worst, it was a cynical exercise coloured by a desire to secure and consolidate the legitimacy of GM foods in the midst of growing controversy. The chief failure of the CBAC GM food project seems to be that it was split from the outset by attempts to be both booster and regulatory reformer. This is reflected in the terms of reference cited above. Put simply, the CBAC's GM food project was hatched out of an apparent desire to examine how GM foods would be commercially deployed in Canada, not whether this deployment should continue, with public consultation predicated on this premise.

We link this problem not only to poorly conceived project design and terms of reference per se, but also to the CBAC’s outgrowth from biotech boosterism at the federal level in Canada, epitomized by the CBAC’s close ties to Industry Canada. This problem, we argue, was one of both appearance and substance. The apparent predisposition of the CBAC to support commercial GMO deployment and its ties to Industry Canada helped discourage many non-governmental organizations (NGOs) from partici-
participating in the CBAC’s public consultations, limiting the efficacy of the project as a public consultation exercise. At the same time, the CBAC GM food project stayed true to its boosterish origins by making recommendations that were highly favourable to business-as-usual, including: a purely voluntary labelling standard for GM foods in Canada; a failure to seriously question the so-called doctrine of “substantial equivalence” in the treatment of GM versus other novel crops and foods, and a failure to recommend transparent and independent peer reviews and scientific risk assessments for new GM crops and foods. All of this was rather nonsensically referred to by the CBAC in its final report as a “precautious” approach to regulation.

Obviously we are quite critical of the CBAC’s GM food project. Explaining and documenting this critique is a major objective of the paper. However, the paper is also intended as a case study of the dilemma faced by liberal democratic governments in responding to concerns about commercial biotech, particularly in those countries where prior state commitments to commercializing biotechnology, including GM crops and foods, run up against significant citizen concern with the technologies after they have already been deployed. In this respect, we also argue that the case has broader theoretical and policy salience in speaking to the contingent ways in which states in capitalist democracies balance and internalize contending demands for renewing the conditions for profitable capital accumulation on the one hand, and responding to contending social and environmental concerns on the other. We take a neo-Gramscian view, arguing that while each of these imperatives may guide state action to a greater and lesser degree, neither must be tied strictly to specific, immediate, and identifiable class interests or projects. Rather, as we discuss in the next section and attempt to show in examining the CBAC GM food project, the case suggests that liberal, capitalist states confront this dilemma via particular arms of a complex, differentiated state apparatus that exists in contingent relation to civil society. Moreover, these dynamics are expressed, in part, at ideological and discursive levels through problem definition, reflecting the inertia of pre-existing policy and institutional trajectories and commitments.

This paper proceeds as follows: it briefly discusses conceptual tools for evaluating the CBAC GM food project and parallel regulatory reviews
involving the production of new environmental risks that are of public concern. It then examines the historical and institutional context out of which the CBAC arose. Subsequently, it examines and critiques the CBAC GM foods project itself, with particular focus on the role and management of public consultation in this project.

Regulating Produced Natures Our analysis and evaluation of the CBAC GM foods project reveals marked parallels with a regulatory phenomenon that Les Levidow, in reference to biotechnology regulation in Europe, has called the “biotechnologizing” of democracy (as opposed to the democratization of technology). That is, a technological option (in this case commercial GM food products in Canada) was in significant measure pre-selected, resulting in an emphasis on securing the conditions for public acceptance of GM technologies in regulatory review and consultation. As Levidow explains, controversy surrounding commercial biotechnology has led governments in a number of liberal democratic states to “create various procedures for framing the issues, for defining the relevant expertise, and for channelling dissent. These procedures have offered new opportunities for critical voices, together with concomitant dilemmas for those who participate.” To the extent to which such reviews allow fundamental questions to be posed in a meaningful way (i.e., in ways that could substantively affect the outcome(s) of the review process), they open to the door to democratizing technology. But to the extent that fundamental questions are foreclosed as part of the institutional and discursive context in which the review takes place, there is the potential for those critical of biotech to be caught in a “participation trap” whereby mere participation is equated with consent, irrespective of the substantive content of public input. In these instances, according to Levidow, democracy is “(bio)technologized.”

Regulatory review processes that foreclose meaningful debate on fundamental questions are indicative of democracy that may be participatory and discursive, but not genuinely deliberative or responsive, particularly given unequal power relations both within civil society, and operating in and through the state. In a discussion comparing Canadian and United Kingdom regulatory responses to the politicization of GM crops and foods,
Hartley and Skogstad argue that the United Kingdom’s approach to public consultation on GM crops and foods has been more genuinely participatory and deliberative than has Canada’s. We agree with their critique of the Canadian approach, particularly where the CBAC is concerned. However, we also view their slippage between participatory democracy and deliberative democracy as being somewhat problematic, particularly in light of the dangers of the participation trap.

We thus argue for a more careful distinction between a public dialogue (participation) on the one hand, and responsive, substantive deliberation on the other. In this respect, processes of public involvement and consultation must always be evaluated in relation to twin imperatives of democratic states in capitalist societies, namely to reproduce the conditions of viable capital accumulation on the one hand, and respond to contending social demands on the other. Public consultation processes may be just as useful in securing the legitimacy of accumulation strategies, as in making regulatory systems more accountable to their wider political context. The very notion that the state cannot be understood merely as the “executive committee of the bourgeoisie” (a common caricature of Marxian theories of the state) implies that state actions are contingent and accountable to different interests over time. But this includes, ironically enough, the possibility that state agencies will be highly aligned with, and responsive to, specific interests such as the biotech industry and its representatives from time to time.

Rather than accepting states as the antithesis of markets, as neoliberal and certain Left orthodoxies would have it, we proceed based on a neo-Gramscian perspective that sees capitalist states existing in relation to, and implicated by, civil society. In this vein, sustaining and renewing capital accumulation on the one hand and competing social demands on the other comprise a dilemma that is constitutive of state action, and the state itself, in environmental regulation and more broadly. This points to an overarching structural condition that frames regulation, implying deeply held ideological commitments to what the state is and should be that operate on and through the state. This does not mean that state action is captured in the narrow sense of the term. Rather, we argue that the articulation of state action in relation to interests is heavily mediated by institutional and
political fragmentation within the state, by the inertia of institutional and policy trajectories, and by important ideological commitments that work through state action. These latter include capital accumulation, national economic growth, and enhanced productivity as ends perceived to be desirable in and of themselves. All of this means that state action is riven by a persistent and irresolvable dilemma whose contingent manifestations make the state — but also conversely the “economic” — irreducibly political categories.\textsuperscript{15}

In this framing, the state must indeed be seen as fractured, differentiated, and contested, relational with but not reducible to any particular class or class fraction.\textsuperscript{16} This renders contingent regulatory outcomes, and allows room for seeing the state as a terrain of struggle. It makes the state “open” both to historical and political analysis, and to political mobilization, particularly when combined with the realization that modern state bureaucracies are complex, differentiated, and sometimes internally contradictory. However, it also means that there is every reason to expect state action and particular arms of the state to be sometimes quite narrowly disposed towards securing the conditions for continued accumulation through regulation, not least because of ideological commitments to capital accumulation, national economic growth, and industrial competitiveness as ends in themselves. These are pervasive discourses in capitalist societies, discourses we would expect to be most evident in those parts of the state most closely aligned with securing the conditions for expanded and more profitable capital accumulation. Industry Canada comes to mind.

At the same time, we would also expect that these two overarching imperatives of state action would come into overt conflict when contending social demands are most immediately and virulently expressed in opposition to capital accumulation and commodity circulation. This is one of the reasons environmental politics in capitalist societies, and particularly food politics, are so important and interesting. They throw into relief, or make “intimate,” the juxtaposition of the demands of the market and a generalized system of commodity circulation with the needs, aspirations, and demands of a broader society, producing a potent (albeit contingent) social friction around the market.\textsuperscript{17} Contending social demands may arise in relation to numerous
issues, including clean air, clean water, and most immediately, safe, sustainable, and ethically acceptable food. Our interest here is to explore how such tensions in this volatile mix work on and through states as sites of social regulation, specifically in relation to GM crops and foods.

**Industrial Agriculture and Agricultural Biotechnology in Canada**
The political economy and regulation of agricultural biotechnology is a serious issue in Canada. The country is host to substantial investments in agricultural biotechnology, Canada was among the first movers and remains a world leader in the establishment of GM crops in commercial cultivation regimes, and Canadian consumers have been exposed to a proliferation of novel food items with GM content since the late 1990s. Significantly, Canada’s relatively early embrace of commercial biotechnology in agriculture was preceded by strong federal commitments to the development of a domestic biotechnology sector in the name of industrial innovation and national economic competitiveness, and in agriculture, as a way of enhancing existing strengths in export markets. In fact, as early as 1983 the Canadian government established the National Biotechnology Strategy, funded to the tune of $10 million annually, and intended to encourage a foundation for biotechnology research and development in Canada, spanning agricultural as well as pharmaceutical and human health applications. In the 1980s, the National Biotechnology Advisory Committee was created, again with strong emphasis on the link between biotechnology and industrial innovation, and on capturing the economic gains from biotech, including GM crops and foods. These commitments to pushing commercial biotech at the federal and provincial levels are important precursors to the CBAC and the renewal of the NBS as the Canadian Biotechnology Strategy in 1998 (see Figure 2 and below). But critically, they also precede in significant measure the development of federal or provincial regulations dealing with environmental, health, ethical, and consumer concerns.

Part of the appeal of biotech in Canada, from an economic standpoint, has always been linked to Canada’s highly competitive, productive, and export-oriented agricultural sector. Canada is a world power in agriculture. Although only approximately 15 percent of the country’s vast land area is
arable, the country’s low population density means its domestic market cannot absorb its food output. Thus, agriculture is, and has been for some time, an important export sector. In 2003, for example, Canada ranked tenth in world maize production, seventh in total wheat production, second in rapeseed (canola) production, and seventh in world soybean production. In terms of exports of these crops, Canada ranked thirteenth, third, first, and sixth respectively. Canadian agricultural exports totalled approximately $24.4 billion (Cdn.) in 2003, representing somewhere in excess of six percent of all Canadian exports.

In this political and economic context, GM technology had a relatively early and large impact on the Canadian agricultural and food sectors. By July 2001, 43 distinct GM crop varieties had been approved for commercial use in Canada, while 50 or more food items containing GM content were on store shelves. And as the total area devoted to GM crops around the world grew at a double-digit rate for the seventh consecutive year in 2003 (reaching 67.7 million hectares and representing a 40-fold increase since 1996), Canada ranked third with six percent of this area (totaling 4.4 million ha) behind only the United States (63 percent of the total) and Argentina (21 percent of the total). The area cultivated in GM crops in Canada increased by 26 percent from 2002 to 2003, propelled primarily by the rapid uptake of GM varieties of canola: in fact, in 2003, nearly three quarters of Canada’s total GM crop area was accounted for by herbicide-resistant canola, and Canadian plantings of GM canola made up almost 90 percent of the world’s total.

Despite the rapid expansion of GM crop acreage and GM food production however, there is not, and never has been, a mandatory labelling standard in Canada. Somewhat predictably, no food processing firms have elected to provide specific information about GM content in their products (only the absence of GM content is noted by some organic and natural foods labels). Thus, most consumers of Canadian foods, whether domestic or international, do not know and have little way of determining if they are consuming GM content.

While commercial deployment proceeded apace, the Canadian government instituted regulatory frameworks for reviewing and approving new crop varieties and for governing intellectual property rights in ways that
encouraged smooth commercialization, typically with minimal opportunities for public input and public information.\textsuperscript{25} This is not to say that no regulations were passed. Rather, Canada’s plant breeders’ rights were amended in 1991 to confer stronger property rights on novel plant varieties, prompted in part by the expectation that commercial GM crops were imminent. Also, in 1993, the Canadian Regulatory Framework for Biotechnology established federal policy on approving GM varieties, embracing the so-called “doctrine of substantial equivalence” vis-à-vis GM varieties.\textsuperscript{26} This controversial regulatory principle stipulates that GM crops are no different categorically than any other novel plant varieties, and thus can be reviewed and approved using existing procedures. In Canada, this means applicants seeking approval supply the data upon which risk assessment takes place, these data are protected from public and independent scientific review by federal guarantees of confidentiality, and science alone (i.e., not ethics, not social acceptability, not demonstrated economic need etc.) is to be used to determine whether the variety will be approved. Consistent with the doctrine of substantial equivalence, Statistics Canada, the government’s official statistical reporting agency, no longer tracks or differentiates the area planted in GM varieties.

The Origins and Circumstances of the CBAC

In the 1990s, as the number of biotechnology applications entering the marketplace increased, attention turned to consumer, social, ethical and other public interest issues.\textsuperscript{27}

Despite clear federal and provincial commitments to GM technologies in agriculture, and the rapid commercial uptake of GM varieties and food products, relatively few opportunities for public information and input were established. Yet, as commercial adoption became a reality, environmental, health, and ethical concerns became more rather than less politicized. In this respect, Canadian antipathy reflects (albeit less virulently) the skepticism about GM foods evident in other jurisdictions, manifest for instance in the highly visible protests against so-called Frankenfoods at the WTO meetings in Seattle in 1999, and also in persistent resistance to GM crop and food
production in the United Kingdom and Europe. In Canada, polls have consistently indicated that Canadian consumers are at least somewhat concerned about health risks from ingesting GM foods, and about the environmental risks that GM crops pose. In 2004, in perhaps the highest profile retreat from commercial GM technology in Canada, biotech giant Monsanto announced it would no longer pursue approval for GM wheat in Canada, citing consumer and farmer opposition to the technology, and the threat this posed to Canadian wheat export markets in particular.

Increasingly, controversy around GM crops and foods has posed a problem for the Canadian government, not only in creating a demand for more rigorous and responsive regulatory reviews, but equally, as an emerging threat to the commercial viability of a golden egg laid in part by state policies. Dealing with both imperatives has been a consistent tension in federal policy since the mid-1990s, a political and institutional lineage that is very much constitutive of the creation of the CBAC and of its myriad problems and shortcomings. In 1995, increasing pressure from consumer and environmental groups prompted the House of Commons Standing Committee on the Environment and Sustainable Development to review GM regulation in Canada, and to recommend in 1996 an independent commission to review environmental, health, and ethical concerns surrounding biotechnology, as well as issues of desirability and need. Two years later, the House of Commons Standing Committee on Agriculture and Agri-Food noted the rapid development of commercial biotech, but also the increasing public concern about specifically agricultural applications. The report echoed earlier calls for more public input and consideration of a wider range of issues in regulatory reviews of novel GM crops and foods.

In this context, the federal government established the Canadian Biotechnology Strategy Task Force in 1997, and reconvened NBAC, again under the auspices of Industry Canada. NBAC’s reformulated mission continued to reflect a boosterish orientation, including advising “the Minister of Industry on issues related to industry growth and competitiveness.” In its final 1998 recommendations, NBAC affirmed Canada’s commitment to the commercial development of biotechnology in Canada with cheerleader-like zeal:
Considered together, the recommendations of the NBAC Sixth Report constitute steps in a coherent strategy to position Canada as a leader in one of the most exciting technologies of the next century. If the challenges are not met Canada’s biotechnology potential will remain largely unfulfilled. The choice is ours to make! If the country seizes the opportunity and builds on its biotechnology strengths as prescribed in this report – Canada can lead in the next millennium!\textsuperscript{34}

However, NBAC also recognized that public concern presented an important challenge to Canada’s competitive position in the commercial development of biotechnology. In fact, framing the problem exactly in these terms, NBAC recommended to its overseers that it be empowered to consider the social and ethical dimensions of biotechnology policy, and to more effectively engage with and involve the public in order to establish “public confidence in Canada’s capacity to manage biotechnology…”\textsuperscript{35}

This was a somewhat controversial recommendation. Specifically, the previously noted report of the House of Commons Standing Committee on Agriculture and Agri-Food had argued for more independence between the federal government’s dual roles as biotechnology promoter and regulator. Qualifying its endorsement, the committee report recommended that NBAC:

\textit{Continue to advise Ministers on the direction and pace of biotechnology and its commercial applications. The Committee has some reservations about whether the body promoting biotechnology should at the same time be central to public debate on the subject; it would rather see some distance between the two functions. (emphasis added)}\textsuperscript{36}

**CBAC** These words were not heeded. The renewed Canadian Biotechnology Strategy (CBS) was announced on 6 August 1998, including, as one facet, the creation of the CBAC as a direct outgrowth of NBAC.\textsuperscript{37} The CBAC would be an expert, ostensibly “independent” panel to advise the Biotechnology Ministerial Coordinating Committee (BMCC)\textsuperscript{38} on biotechnology policy issues, based in part on public involvement and consultation. More specifically, the CBAC was described in the following terms at the occasion of the CBS renewal:
The new advisory committee will have an important mandate to give Canadians a forum to voice their views and concerns. CBAC will act as the catalyst, engaging Canadians in an ongoing, open and transparent dialogue on biotechnology issues, including ethical and social issues.  

The committee was charged with providing ongoing advice on biotechnology-related issues on a more or less as-needed basis (including developments in genomics, stem cells and cloning, agricultural biotechnology, patenting, genetic information and privacy, and transgenic technologies), as well as more in-depth treatment of topics named as “special projects.” The first of these projects included: regulation of genetically modified food; intellectual property issues in biotechnology; issues related to novel uses of biotechnology (such as stem cells); incorporating social and ethical considerations into policymaking around biotechnology, and privacy issues related to genetic information. During its first phase of operation, ending in 2002, the CBAC dealt primarily with the first two of these, including an examination of the review process for proposed commercial release of GM foods and the desirability of labelling for food products containing GM organisms.  

The CBAC departed from its NBAC predecessor in two important ways. First, the CBAC was charged with advising the BMCC not only on the scientific and regulatory aspects of biotechnology, but (following NBAC’s recommendation and public consultation undertaken in the renewal of the CBS) on ethical, social, economic, environmental, and health issues as well. Second, the CBAC was charged with engaging the Canadian public directly on biotechnology issues. Yet, despite these differences, the CBAC remained closely associated with Industry Canada, reporting to an interministerial body (the BMCC) that is chaired by Industry Canada (see Figure 1). This is clearly problematic in that, at best, it creates the appearance of a conflict of interest between Industry Canada’s role as a promoter of Canadian innovation and as a long-time supporter of biotechnology, and the CBAC’s role in consulting and involving the public on issues and concerns surrounding the regulation of biotechnology, and specifically of GM foods. As one CBAC member critical of this institutional configuration put it:
We certainly wouldn’t want it (CBAC) housed in Industry Canada, it would [ideally] be an independent body which would manage its own money and its own programmes.41

Moreover, as this quote suggests, affiliation with Industry Canada is not just a problem of appearances. The board of the CBAC itself was established as an expert, independent advisory panel composed of members drawn from other spheres. Yet, these members were recruited as volunteers, committing on the order of 10 days per year to CBAC activities and functions.42 Faced with a complex and difficult mandate, much of the burden of responsibility for day-to-day operations, including no shortage of key decisionmaking, fell on CBAC staff. Funding and staff were provided to the CBAC courtesy of the CBS Secretariat, which is directly affiliated with Industry Canada. CBAC Secretariat staff members not only administered much of CBAC’s work on the GM food project, they also critically undertook much of the work designing and implementing public consultation processes and drafting key documents. Indeed, CBAC relied so heavily on staff that CBAC members themselves suggested the project was “staff-driven.”43

While Industry Canada’s role in promoting economic growth and industrial innovation was a good match for the National Biotechnology Strategy when it was first created, and remained so through the end of NBAC’s second iteration in 1998, the expansion of CBAC’s mission made this match less good. This is evident perhaps most directly in the assignment of staff drawn from Industry Canada to work for CBAC. These staff members come from an arm of the Canadian state whose mission is to promote industrial innovation and competitiveness, and these are people whose tendency would be to see such things as ends in themselves. Interview data and the way that the CBAC conducted its public consultation process point to consistent tensions over the purpose of the CBAC and its relationship to public concerns, manifestations not of overt hostility to more stringent social regulation of biotechnology on the part of Industry Canada staff, but rather of a pervasive ideological commitment throughout Industry Canada to the support of economic growth and capital accumulation; it is the raison d’etre of the Ministry.44 From this standpoint, seeing public consultation primarily as a vehicle for enhancing the legitimacy of commercial biotechnologies, as
opposed to being a precursor to, or constitutive of, a fundamental change in the GM crop and food regulatory system, is actually quite understandable. It is even predictable, as the previously cited 1998 House Committee report indicates.

However, a second problem with the CBAC concerns the actual composition of the board during the first phase of the GM food project. Initially, the CBAC was composed of 20 members. Of these, 12 were drawn from the academic and medical sciences research communities, five from the business community, one was a communications official in the university health sciences field, one a private nutritionist, and the sole remaining member was drawn from the ranks of non-aligned citizen, non-governmental organizations. While the committee could hardly be said to have been stacked with industry representatives, there was nevertheless an apparent preference for individuals associated with commercial biotech ventures and business interests over those from the NGO community. Members were selected by the BMCC from a pool of more than 175 names forwarded in response to a call for nominations. Yet, critics, particularly NGOs, charged that the CBAC was not representative of the spectrum of concerns on biotechnology issues, specifically on the question surrounding GM foods. The issue is not that members orchestrated any particular, overt coordinated bias in conducting CBAC business. Rather, the composition of the committee simply omitted members who were fundamentally skeptical about the entire exercise of commercializing biotechnologies, particularly GM foods (a skepticism shared by most Canadians). This narrowed the committee. And with only a single member of the committee drawn from the NGO community, it also helped drive a wedge between the CBAC and citizen groups who felt disenfranchised by an organization intended, in part, to respond to them. This rift became evident during the public consultation phase, when the Canadian NGO community organized a complete boycott of the CBAC (see below).

**The CBAC GM Food Project** The GM food project proceeded in three phases. In phase one, the CBAC commissioned background research by experts in a range of areas related to the regulation of GM foods, reviewed
public opinion surveys, and held a workshop with regulators to discuss the Canadian regulatory system. The CBAC also established a Reference Group for the GM food project, comprised of 12 individuals (i.e., not CBAC members) to serve as an informal advisory body and sounding board for the GM foods project, particularly the public consultation component. On the basis of the information collected, CBAC identified real and perceived challenges facing the commercialization of GM foods and food products, and a number of policy options to address these challenges. These formed the foundation of a consultation document released in early 2001.\textsuperscript{45} CBAC then conducted what were called “national stakeholder and public consultations” in phase two of the project. Phase three commenced with the CBAC’s draft recommendations, published in August 2001 and accompanied by an invitation for Canadians to comment. The CBAC submitted its final recommendations to the BMCC in August 2002.\textsuperscript{46}

Several problems plagued this project, particularly as it pertained to the way the public was engaged both in consultations and through comments solicited and submitted in response to the interim report and recommendations. First, debate was solicited, channelled, and framed in such a manner as to restrict and exclude fundamental questions, including the underlying need or demand for GM crops and foods. Thus, the desirability of GM foods from a social or broader economic standpoint was not addressed as a complement to emphasis on techno-scientific feasibility and safety issues. Second, and in related fashion, the amount and style of public input to the CBAC was managed in a way that undermined any sense that the CBAC was serious about an open and transparent dialogue. Together, these further entrenched the appearance of a predisposition— inherited from NBAC and reproduced by the association with Industry Canada and the CBAC’s narrow membership composition— towards the commercialization of GM foods.

The CBAC made a very early decision to narrow the scope of its considerations, and thus the range of inputs it would consider. A relatively narrow focus examining social, ethical, and related consumer concerns through the lens of establishing the preconditions for successful commercialization was legitimated by the argument that the CBAC should avoid duplicating work undertaken by the Royal Society of Canada. Specifically:
In early 2000, the ministers of Health, Agriculture and Agri-Food, and Environment asked the Royal Society of Canada to convene an Expert Panel to provide the federal government with advice on the scientific capacity required by Canada’s regulatory system to ensure the safety of new food products being developed through biotechnology. In view of the Expert’s Panel’s mandate, we decided to focus our attention on strengthening regulatory structures and process and on approaches to assessing the social acceptability of GM foods.47

While this approach seemed quite reasonably aimed at avoiding duplication, it also allowed the CBAC to avoid questions about the fundamental desirability and demand for GM crops and GM food products, and to focus exclusively on “strengthening regulatory structures” and the “social acceptability of GM foods.” As one member of the CBAC Secretariat Staff put it bluntly, “the option of whether GM foods should be on the market at all was not explored by the committee.”48

This problematic framing was then compounded by the CBAC’s approach to engaging the Canadian public. Specifically, only vague definitions and commitments were made regarding the form and extent of public consultation, and the degree to which this consultation would be genuinely deliberative. While the CBAC mandate prescribed the conduct of “an open, transparent national conversation” on the issues, little additional guidance was given on how this would be achieved (i.e., what would meet this standard), and exactly how the public input would be incorporated into the CBAC’s recommendations. Pushed by the Reference Group to define these issues more carefully, the CBAC retreated from a more comprehensive public consultation, citing the committee’s tight two-year timeline.

The CBAC’s active consultation process began with the circulation of a consultation document, followed by a series of workshops. The consultation document was mailed to approximately 150 organizations identified as having some interest in the issue of GM food regulation, but it was also made more generally available on the CBAC website. Those interested were asked to read the consultation document and to respond to a questionnaire by 20 April 2001. The results of these questionnaires were summarized and published by the CBAC. Coinciding with the end of the comment period
(and, critically, before a summary of responses to the CBAC document were published), workshops were held in Vancouver, Saskatoon, Toronto, Montreal, and Halifax between 2–10 April 2001. The scope of the discussion at these workshops was again framed in such a way as to preclude fundamental questions about the desirability or acceptability of GM foods, emphasizing instead how the regulatory system could best accommodate these new food products.

The CBAC’s ill-defined mandate for, and apparent indifference to, consulting the public was further manifest in its approach to recruiting participants to the stakeholder workshops. Without clear guidance on how to undertake this recruitment, and having built extremely weak ties to the NGO community (reflected not least by the committee’s membership), the CBAC then turned to the consulting firm KPMG to recruit participants. This move vested control of the recruitment process in a company known best as a corporate management and accounting consultant. Somewhat incredibly, it was actually KPMG (i.e., not CBAC directly) that contacted groups being solicited for participation in the workshops.

In response to having been invited to the workshops by KPMG rather than the CBAC, and in reaction to the narrow framing of the discussion and concerns about CBAC’s ties to Industry Canada, a coalition of NGOs led by Greenpeace, the Council of Canadians, and The Ram’s Horn circulated a letter to NGOs across Canada urging them to boycott the CBAC workshops, as well as the GM food project more generally. The letter specifically justified the boycott by viewing the workshops as a potential “participation trap.” That is, the NGOs suspected that the CBAC could use participation in the workshops as a basis upon which to legitimate its recommendations, whatever these might be. They thus identified the essential problem of purely discursive democracy under conditions of unequal power relations. The letter was ultimately signed by more than 50 NGOs and delivered to the first stakeholder meeting in Vancouver, British Columbia, on 2 April 2001. Not surprisingly, two fundamental themes emerged from the workshops, conveyed to the CBAC by those who did attend. The first was that the NGOs should be involved and the second was
that the CBAC should broaden its engagement with the Canadian public in its consultations.

Neither of these things happened. Instead, in the summer of 2001, the committee released its interim report on the regulation of GM foods in Canada.\textsuperscript{50} The report included numerous recommendations, including: the consolidation of a highly fragmented and confusing array of regulatory review processes; the creation of a better system of monitoring to track the long-term health and environmental effects of GM crops and foods; increased transparency in the regulatory process; strengthened federal stewardship over GM foods, and perhaps most critically, the development of a purely voluntary labelling standard for food products containing GM content. Somewhat paradoxically, the report also embraced both “precautionary” and “ecosystem” approaches to regulating GM crops and GM foods, although these were not actually defined. This report was posted on the CBAC website, with an invitation to Canadians to comment on the report’s interim recommendations within a six-month time frame.

Despite what could be described as a low profile if not “stealth,” approach to soliciting response to its interim report, 160 individuals, including one of this paper’s authors, wrote in to respond to the draft recommendations. Ninety percent of these respondents objected specifically to the voluntary labelling standard. Yet, the CBAC did not mention this in its final report, issued in August 2002. In fact, the final report omitted even an overview of the public comments submitted in response to the interim report, noting only the dissenting view of CBAC member Anne Mitchell, Executive Director of the Canadian Institute for Environmental Law and Policy (CIELAP), who specifically opposed the voluntary labelling standard (which she justified in part based on reference to objections raised in public comments). To date, the written comments to CBAC’s interim report on GM foods have not been made public.\textsuperscript{51}

The committee actually made no changes to its final report on GM food regulation in any way that was explicitly tied to public input. Evidence points to some considerable confusion on the CBAC’s part regarding how to, or even whether to, make any use of the public input to the committee. As one of the CBAC staff members blandly observed:
The question of what to do with responses, other than highlighting the main points in such summary documents after so much time and money has been spent on consultations is vital.52

Yet nothing was done with the consultations that the CBAC had overseen. And while the CBAC’s status as an expert advisory panel provided a foundation for departing from the advice it did receive, the committee’s decision to not publish written comments or a summary would seem to be in some degree of tension with the CBAC’s mandate to undertake an “open and transparent dialogue.”

At the same time, though, a sample of 160 responses to the interim report is a questionable representation of Canadian views; this small number is attributable, in part, to the CBAC’s poorly conceived approach to consultation. The fact that more than 90 percent of these comments specifically objected to the voluntary labelling standard and called for a mandatory one instead is highly suggestive, and is consistent more generally with widespread suspicion among the Canadian public towards GM foods. The CBAC’s final report, however, cited the fear of falling out of line with existing international trade agreements as a reason for not requiring a mandatory standard (this despite allowances for restrictions on GM products under the World Trade Organization based on sound environmental, health, and ethical grounds).

Aside from its apparent indifference to the public consultation that comprised part of the committee’s mandate, the CBAC’s report on GM foods is problematic in other respects. As noted, the committee endorsed, yet failed to define, what it meant exactly by “precautionary” and “ecosystem” approaches to regulation. Yet the CBAC’s recommended approach to regulating GM crops and foods flies in the face of internationally accepted standards of precautionary regulation in several respects. First, the committee never addressed the underlying need for GM products. In the absence of demonstrable need, no change in the food system of this magnitude is consistent with precautionary regulation. Second, there are clear tensions in a regulatory system designed to institutionalize precaution that does not require labelling as one of its essential measures, if only to empower
consumers to avoid products they suspect may endanger their health. Here, food allergies and spiritual objections are a key concern if genetic engineering applications introduce items into food that consumers may wish to avoid. Third, Canada’s entire approach to the commercial development of GM crops and foods to date has arguably violated precautionary regulation, since deployment has preceded clear, scientific foundation for the doctrine of substantial equivalence equating GM crops with novel, non-GM varieties. Some of these concerns about how precautionary regulation should be interpreted, and specifically in relation to the doctrine of substantial equivalence, are echoed in a Royal Society of Canada report on regulating food biotechnology in Canada that is highly critical of the existing regulatory system. Yet, the doctrine of substantial equivalence was never questioned by the CBAC’s GM food project.

The report had other problems. These include its recommendation that the position of Chief Safety Officer be created to oversee the review of GM crops (and its call for greater transparency in the regulatory process) in the absence of provisions for independent peer review of the credentials of anyone hired to this position and without any mechanism to require this officer to be accountable to the Canadian public. The CBAC failed to challenge Canada’s historic and ongoing commitment to ensuring the confidentiality of applicants for the approval of novel foods, as well as the Canadian state’s reliance on these same applicants for provision of basic scientific data on which to base risk assessments. Strengthening the regulatory system to make it more accountable and transparent, both to the wider public and to an independent scientific community, would seemingly require that these existing commitments be compromised.

Given all of these problems, it is, in our view, quite hard not to be sympathetic to the views of the NGOs who boycotted the CBAC’s consultations and workshops, and who have remained highly critical. As they noted in their letter announcing the boycott:

The rapid introduction of genetically engineered foods has raised serious concerns among the public, notably the lack of testing for long-term impacts on human and environmental health and the lack of democratic process.
Faced with mounting criticism, the Canadian government has formulated a strategy to win public acceptance of genetic engineering, without addressing these concerns — we believe that CBAC is a part of this strategy.\(^{55}\)

At least some of the criticisms appear to have been validated by CBAC activities since completion of the final report. The CBAC’s board membership, for instance, was significantly reshuffled, with six new members named in August 2002, coincident with the release of “Regulation of Genetically Modified Foods.” These new members included Conrad Brunck, former chair of the Royal Society of Canada’s Expert Panel on the Future of Food Biotechnology and openly critical of the CBAC’s GM food project. Even still, only one member of the NGO community was retained, along with one member from outside of relevant business and scientific communities.\(^{56}\)

A second development after the report was issued seemed to acknowledge, albeit tacitly, the shortcomings of the public consultation conducted by the CBAC GM foods project. Specifically, in the aftermath of the 2002 report, the CBAC began to develop what it called the “Acceptability Spectrum,” based on an idea that emerged during the consultations. This was essentially a tool developed by CBAC staff to characterize NGO and citizen positions. The spectrum organizes and classifies viewpoints on GM crops and foods based on health, environmental, socioeconomic, ethical, and broader “societal” issues.\(^{57}\) A refined version of this was renamed the “GMFF (Genetically Modified Food and Feed) Dialog Tool” in March 2003, and launched as an attempt to more systematically track, but also solicit, public consultation. This is ongoing.

**Conclusion** As of the final draft of this paper, no further project report has been issued and none is planned. Yet, the CBAC GM foods project remains open to monitor public opinion and to participate in the evolution of GM food regulation in Canada, particularly vis-à-vis the CBAC’s own recommendations.

The impact the CBAC has had is difficult to gauge. This is partly because the exercise was more discursive than deliberative in two respects. First, as discussed, the committee’s responsiveness to public input, even after the
development of its “Dialog Tool,” has been ambiguous at best. But secondly, the Government of Canada established the CBAC in a purely advisory capacity. Thus, while input to the committee may go nowhere, the committee’s input may also go nowhere. This could be a good thing. The Canadian government has received one expert report from the Royal Society of Canada whose disposition on GM food regulation is quite different from the CBAC’s, calling as it does for a near complete overhaul of the Canadian approach to regulating GM crops and foods. So far, changes have been more incremental.

Yet significantly, in April 2004 the Canadian Government did adopt one of the CBAC’s key recommendations, making a purely voluntary labelling standard official policy. This standard is virtually meaningless because it requires no action by food producers to disclose GM content per se. It also flies in the face of public opinion. One month after the federal government’s announcement, a poll coinciding with the meetings of the Codex Alimentarius meetings in Montreal on labelling revealed that more than eight in ten Canadians want mandatory labelling for GM content. Meanwhile, a proliferation of GM crops and foods (particularly processed foods, in which GM content is highly prevalent) continue to circulate in Canadian markets without labels. And these products continue to be treated largely according to the doctrine of substantial equivalence that does not differentiate them categorically from conventional foods.

Our purpose in this paper has been to contribute to a growing literature tracking divergent approaches to regulating GM technologies in agriculture and food, in both domestic and international arenas. In this context, we have also sought to add our voices to those critical of the Canadian government’s approach to regulating GM technologies in the agrifood sector, both in general and specifically as manifest in the CBAC GM foods project. These voices include those of citizens and NGOs, but also scholarly analyses skeptical of Canada’s approach. We argue that the problems with the CBAC’s GM food project were not merely accidents or mistakes, but stemmed from the committee’s institutional and policy heritage linked to biotech boosterism, onto which was grafted a responsibility to consult the public on the adequacy of existing regulations over GM crops and foods.
Ongoing and close ties to Industry Canada, and an overall discursive and ideological framing that posited accumulation and industrial competitiveness as ends in and of themselves vis-à-vis biotechnology (which is the context from which the CBAC emerged) were incompatible in both appearance and substance with a genuine, deliberative, and open-ended consultation and analysis of how best to regulate GM crops and foods.

We also see this case as highly germane in highlighting the ways that democratic states in capitalist societies must balance the need to reproduce the conditions for profitable capital accumulation (and thus be seen to be “growing” the economy) while responding to contending social concerns that may directly seek to curtail economic activities. As Dryzek has argued, environmental conflicts and politics hardly transcend this dilemma, notwithstanding whatever other distinctions characterize the politics of environmental change, risk, and the like. Indeed, and as others have pointed out, the culturally loaded and embedded character of food as a class of commodities throws these tensions into sharp relief, and biotechnology — as a controversial suite of innovations with intersecting social, ethical, environmental, and health implications — provides rich opportunities for exploring how they work themselves out. In this context, and as MacMillan argues, specific instances of regulatory conflict serve as reminders not only of the controversy surrounding these technologies, but also of “the structural necessity of state regulation to the business of biotechnology.”

Drawing from a neo-Gramscian theory of the state, we argue that these necessities are best viewed in terms of ideological commitments, institutional histories, and legacies that differentiate the state internally, and that position different parts of the state in particular ways in relation to civil society. Yet this view also suggests a fundamental ambiguity about the politics of public consultation in technology regulation. If democratic, capitalist states are confronted by the aforementioned twin dilemma in promoting, but also regulating, biotechnology (and in other arenas), then the question concerning public input must concern not only the degree to which input may be characterized as representative and participatory. Rather, public input must also be seen as potentially critical to securing the legitimacy of preselected techno-
logical trajectories and avenues for accumulation. We see this as being consistent with what Levidow means by “technologizing democracy.” The NGOs who organized the CBAC boycott clearly were aware of this danger in wanting to avoid a participation trap. If the CBAC has begun to shift towards a more substantive and responsive approach to soliciting public input since 2002 (a transition very much in its infancy), this reflects the limits of a public consultation strategy framed as an exercise in shoring up public acceptance of GM crops and foods whose input generated serious objections to both the technologies and the manner of the CBAC’s consultations. Put differently, the ambiguity and contingent character of public consultation — on the one hand to secure profits and on the other to secure the public — became a contradiction the committee could not, and has yet to, resolve. Whether the Canadian government will attempt to resolve this dilemma differently in the future is one of the reasons to pay attention to the unfolding politics of biotechnology in the agrifood sector.
Figure 1: CBAC Structure

BMCC
7 Ministers led by
Minister of Industry

COMMITTEE OF THE WHOLE
CBAC Chair & all Members

EXECUTIVE COMMITTEE
CBAC Chair & 3
Standing Committee Chairs
(Annual Report & Editorial Board)

STANDING COMMITTEES
1. Stewardship
2. Citizen Engagement
3. Economic & Social
   Development
   Each with Committee Chair & Members

SPECIAL PROJECT STEERING COMMITTEES
1. Regulation of GM Foods
2. Intellectual Property & Patenting of Higher Forms of Life
3. Genetic Privacy
4. Incorporating Social and Ethical Considerations into
   Biotechnology
5. The Use of Novel Genetically-Based Interventions
   Each with Committee Chair(s) & Members

COMMITTEES AFFILIATED TO THE GM FOOD PROJECT
1. Reference Group
2. Acceptability Spectrum Exploratory Committee
   Each involving participants outside the CBAC membership and Secretariat
Notes

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Studies in Political Economy


10. Ibid.

11. For example, the question as to whether there is a defensible social or economic need for the new technology, rather than whether it is scientifically safe. This is clearly relevant to the CBAC GM foods project, as we argue.


21. Export data taken from Statistics Canada Merchandise Trade Database, available through the University of Toronto Library, Data Library Service.

22. These data from the Canadian Biotechnology Advisory Committee, *Annual Report 2003* (Ottawa: Canadian Biotechnology Advisory Committee, 2004). Some estimates had a higher number of distinct GM products, owing to the proliferation of GM content in processed foods, not least via GM canola oil. The NGO boycott letter sent to CBAC in 2001 (see text below) stated that 70 percent of all food in Canadian supermarkets, as of the writing of the letter, had some GM content. We cannot verify or refute this number, although by now the number must be high indeed. By December 2004, the number of distinct GM crop “events” registered as approved in Canada had grown to 63. A distinct event in this context is defined by a unique combination of crop species, gene construct, and company responsible. These more recent data are taken from the AGBIOS GM database on 9 December 2004. Available online at <http://www.agbios.com/dbase.php>.


25. Hartley and Skogstad, “Regulating Genetically Modified Crops and Foods in Canada and the United Kingdom...”


29. For example, on 3 May 1999, roughly coincident with the establishment of the Canadian Biotechnology Advisory Committee, the Canadian Broadcasting Corporation, the nation’s official, publicly funded broadcaster, reported that a variety of polling sources pointed to growing concern about GM foods and the availability of information regarding such foods. See “Canadians Want More Info on Biotech Foods,” CBC Newsworld, available online at <http://newsworld.cbc.ca/cgi-bin/go.pl?1999/05/03/gefood990503>. Such concerns have persisted. More recently, more than 1,400 Canadians were surveyed in March 2004 on behalf of Health Canada (a federal agency charged with setting and enforcing health policy in Canada), with more than 90 percent reporting that they were concerned about the long-term risks of GM foods. See “Survey: Canadians Suspicious of Biotech Foods,” 25 January 2005, <http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1106697662604_31/?hub=Health>.


31. Hartley and Skogstad, “Regulating Genetically Modified Crops and Foods in Canada and the United Kingdom...”


41. Interview with a CBAC member conducted by one of the authors on 10 November 2002 in Toronto, Ontario.

42. This number is an estimate provided by a member of the CBAC Secretariat staff on 24 September 2002.

43. Interview conducted by one of the authors with a CBAC member on 10 November 2002.

44. Industry Canada’s website lists its mission as follows: “to foster a growing competitive, knowledge-based Canadian economy. The department works with Canadians throughout the economy and in all parts of the country to improve conditions for investment, improve Canada’s innovation performance, increase Canada’s share of global trade and build a fair, efficient and competitive marketplace,” <http://www.ic.gc.ca/cmb/welcomeic.nsf/ICPages/Department> (last accessed 14 June 2006).


46. Canadian Biotechnology Advisory Committee, *Improving the Regulation of Genetically Modified and Other Novel Foods in Canada.*


48. Interview conducted by one of the authors on 24 September 2002.


51. A CBAC summary of the comments was included as an appendix, but does not highlight the degree of opposition to the voluntary labelling standard.

52. Interview with a CBAC Secretariat Staff member was conducted by one of the authors on 24 September 2002.


55. Letter of 29 March 2001 was authored jointly by Greenpeace, The Council of Canadians, and The Ram's Horn and circulated to Canadian NGOs. Obtained by one of the authors in an interview with an NGO activist on 17 July 2002.

56. These members are Anne Mitchell of the Canadian Institute for Environmental Law and Policy and Denny Werner, a private citizen and former Chair of the Citizens’ Panel on Food Biotechnology. Data on membership was collected from the CBAC membership website <http://cbac-cccb.ca/epic/internet/incbac-cccb.nsf/en/ah00339e.html> (accessed 12 August 2004).


62. Dryzek, *Deliberative Democracy and Beyond: Liberals, Critics, Contestations*.


64. Hartley and Skogstad, “Regulating Genetically Modified Crops and Foods in Canada and the United Kingdom…”

65. Levidow, “Democratizing Technology – or Technologizing Democracy?...”