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The Genius of the Nation versus the Gene-Tech of the Nation: Science, Identity, and GMO Debates in Hungary

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**THE GENIUS OF A NATION VERSUS THE GENE-TECH OF A NATION:
SCIENCE, IDENTITY, AND GENETICALLY MODIFIED FOOD IN HUNGARY***

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Introduction

In the late 1990s, Hungarian politicians, environmentalists, and agricultural lobbyists weighed the pros and cons of allowing genetically modified (GM) food and seeds to enter the Hungarian market. Starting around 1994, a small group of Hungarian environmentalists began researching GM issues. Initially, they feared that as a post-socialist country seeking foreign investment, Hungary would become prey to multinational corporations seeking an ‘emerging market’ with a lax regulatory environment. The terms of the debate were reframed over time, notably following 1998, when a number of European Union member states banned the imports of GM foods and when Hungarian expatriate geneticist Árpád Pusztai was caught in a high-profile media controversy after expressing misgivings about the health risks associated with GM foods. The Hungarian public, previously agnostic on the subject of genetically modified organisms (GMOs), was suddenly engrossed in a debate that came to draw upon two key symbols of contemporary Hungarian national identity: the figure of the scientist and that of the industrious peasant producing wholesome food. With Hungary’s entry to the European Union, concerns about GMOs, food safety, and science and technology policy, have taken on an increasingly high profile in public debates about the European enlargement process.

Background

In the past decade, transgenic crops and food emerged as a major focal point for public debate in various settings around the world. Because GM food connects the activities of scientists, corporations, and regulatory systems with the intimate, embodied experience of eating, it provokes sharp controversy. GM foods serve as a social lens, drawing and

focusing public attention to a range of conflicts related to the politics of food. These include debates over the health and environmental risks posed by the introduction of transgenic technologies into the daily practices of producing and consuming food, contests between the multinational agribusiness corporations and small-scale farmers, and a host of ethical controversies about the social and economic effects of biotechnology.

Transgenic food technologies involve the work of various social actors: scientists, multinational corporations, policymakers, social movements, the media, and the ‘public’ (Heller and Escobar 2003). Although scientific networks play an important role in creating scientific knowledge and implicit, normative assumptions about how scientists and other citizens should think and talk about GM foods, they are not the only participants in GM debates. Multinational corporations supply funding and influence the goals of transgenic research and development, and they promote the technologies through lobbying, litigation, and marketing. Policymakers in national governments and supranational regulatory bodies (such as the European Union) deliberate and police acceptable uses of new technologies. Social movements such as environmentalism demand public participation in policy decisions about potentially technologies (Beck 1992), and as public discussion on GM foods is opened to a wider circle of participants, they act as ‘revealers’ of discursive themes, frames, and styles that are implicitly excluded from hegemonic policy discourse (Melucci 1985).

Perhaps the most important figure in GM debates—and the most amorphous—is the ‘public,’ conceived here as the imagined collective body that is simultaneously the target audience of the media, the object of knowledge about ‘public opinion,’ the subject of policy, and the source of legitimacy for modern governments (Foucault 1970, Domínguez 1989).

The 'public' is larger than social movements such as environmentalism, but these social movements often 'stand in' for the 'public' because they demand representation for citizens and for 'non-expert' perspectives that are marginalised in hegemonic scientific and policy discourses (Beck 1992). Similarly, the media play an important role in the creation of the 'public,' both by communicating to a community of readers (Anderson 1985) and by objectifying 'public opinion' in coverage of GM controversies.

As one of the first technological controversies following Europe's political unification, GM debates have come to play a vital role in the creation of a 'European public.' While many social scientists examine Western European GMO debates, extremely little is known about the politics of transgenic food in Eastern Europe. In May 2004, over 75 million Eastern Europeans (including over ten million Hungarians) were admitted into the European Union. Thus far, the literature on European enlargement has focused primarily on issues of legal harmonisation and ensuring enforcement of new standards, with relatively little discussion of the cultural context of Europe's eastward expansion. A great deal has been written about identity formation and the subjective experience of Europeanisation in Western Europe (cf. Shore 2000, Wilson and Smith 1993, Bellier and Wilson 2001, Borneman and Fowler 1997), but few social scientists have studied Eastern Europeans' expectations of European enlargement. The study of the role of the environmental movement in the GMO controversy in Hungary can therefore shed light both on the relationship between environmental/health movements and the making of a 'public' and the conditions of this activity in a situation where national publics are being renegotiated with an emergent supranational European public.

Methodologically, this problem lends itself to long-term ethnographic fieldwork with a focus on discourse and meaning. The content and contexts of Hungarian GM discourses transformed as they moved over time from the narrow confines of scientific institutions to a broader field involving social movements, Parliament, the mass media, and Hungarians' daily consumption practices. 'GM talk' was more limited and unified when it was confined to scientists constrained by tacit disciplinary conventions (against 'politicising' scientific knowledge), but it has grown increasingly varied and contested as more actors participate in it. Like environmental discourses more generally, 'GM talk' is a 'transcultural discourse' crossing the world and being transformed by the diverse social actors it encounters in its travels (Milton 1996). Discourses on GMOs are forged within transnational networks of scientists, corporate executives, social movement activists, policymakers, and others with competing visions of the perils and promises of transgenic technologies (Heller and Escobar 2003). At the same time, local, regional, and national political cultures and identities structure how GM issues are made to matter.

If it is now harder to locate Hungarian GM discourses in one institutional space, it has simultaneously become easier to find examples of 'GM talk' dispersed through social spaces where they link up with other cultural objects, often in unexpected ways. One cannot study GM discourses in isolation; as anthropologists Sylvia Yanagisako and Carole Delaney remind us, 'people think and act at the intersections of discourses' (Yanagisako and Delaney 1995: p. 18). To study the 'social life' of GM foods, one must pay attention to how the object itself transforms as it moves through different settings and as 'GM talk' is cross-indexed with wider political debates and identities, purported historical antecedents, and other cultural themes and attachments.

Ethnographic research attempts to document discourses and practices as they are performed spontaneously in the course of daily life. Cultural analysis demands a holistic analysis of GM discourse, tracking the tacit assumptions, symbolic resonances, and logics of practice that make up the political culture in which such debates take place (Milton 1996, Fischer and Hajer 1999). Ethnography is well suited to locating the intersections of seemingly disparate discourses: science and the transformation from state socialism, food and political identity, the image of the Hungarian peasant and *Jurassic Park*.

Conducting ethnographic fieldwork among urban environmentalists in Budapest in the mid-1990s, I witnessed and participated in the earliest stages of transnational networking and domestic mobilisation around GMO issues. Returning for further fieldwork in 2000 and 2002, I interviewed key anti-GM activists from the environmental movement. I collected documents covering the GM debates, ranging from environmentalist newsletters to tabloid, mainstream, and scientific journalistic accounts. I was thus able to observe shifts in the discursive framing of GM foods and crops over time and in relation to the larger political culture of post-socialist Eastern Europe.

Setting the Stage: The Emergence of Environmental Politics in Hungary

More than any other public institution, the domestic environmental movement played a critical role in opening up debate on GM foods and crops to the larger Hungarian public. Hungary's environmental movement is among the largest and most established in Central and Eastern Europe. Ornithological and nature protection associations have existed in Hungary off and on throughout the twentieth century, and in the 1970s, the state socialist government sponsored the establishment of official environmental organisations. The 1980s oppositionist movement against the damming of the Danube River is widely acknowledged

as the origin point of today's environmental movement by both environmentalists and the general public in Hungary. In the Danube movement, environmental issues acted as a wedge, exposing the state's role in ecological degradation and making room for a broader critique of social issues and political life. Participants in the Danube movement published essays and scientific reports in the *szamizdat* (underground) environmental press. The sweeping political changes of 1989 led to a realignment of dissident-style environmentalism, but the movement retained much of the public trust it accrued as a site of democratic opposition to state socialism.

Following the change of political systems in 1989, the environmental movement diversified tremendously, with non-governmental organisations (NGOs) on local, regional, and national levels working on such themes as traffic, air quality, consumer education, waste management, and river ecosystems. In addition, various groups have formed ties with international environmental organisations, ranging from the World Wide Fund for Nature (WWF) to Action for Solidarity, Equality, Environment, and Development (ASEED) and World Bank Watch. Although Hungarian environmental groups continue to lay considerable stress on public participation and the rejuvenation of small-scale, local economies, they articulate issues in dialogue with activists from international environmentalist networks.

Like all social movements, the Hungarian environmental movement has internal divisions, and environmental issues are more often constructed through contestation and political bricolage than through the application of shared environmentalist principles. Participants distinguished between 'városi' and 'vidéki' ('urban' and 'rural/provincial') environmentalists, contrasting the two groups in terms of style, issues, and tactics. Many,

but not all, of the urban groups had roots in dissident environmentalism, while groups in the countryside often traced back to reform movements within state-sponsored organizations such as the Patriotic People's Front. In the economically depressed eastern counties, environmentalists had to convince constituents that creating jobs and protecting the environment were mutually compatible goals.

Another important internal distinction is drawn between *természetvédők* ('nature protectors') and *környezetvédők* ('environmentalists'). 'Nature protectors' concern themselves primarily with preserving wild plants and animals in their natural habitats, while 'environmentalists' primarily mobilise against environmental threats to human health and well-being such as air and water pollution, toxic waste, and nuclear contamination. Environmentalists criticised 'social' problems of pervasive health risks, and they demanded greater public participation in planning and policy. Environmentalists' campaigns sought to crack open the state's monopoly on representing public opinion and making decisions on citizens' behalf. Because of this, both state socialist officials and activists themselves characterised 'environmentalists' as more 'political' (and potentially more threatening to the state) than the 'nature protectors.' The distinction between 'environmentalists' and 'nature protectors' persisted well into the 1990s, but it eroded considerably as 'nature protectors' found themselves increasingly involved in disputes over development and land privatisation as they defended natural habitats.

When activists began to mobilise on GM issues, they made a point of drawing leaders from both the capital city and the provinces, and from both the 'nature protection' and 'environmentalist' strands of the movement. Although the more 'environmentalist' concerns of food safety and health risks came to attract more public attention than did

‘nature protectors’ fears about the effects of transgenic pollution on biodiversity, both parties participated in framing anti-GM discourses.

Hungarian discourses on GM foods and crops take place in a context where dramatic political and economic transformations have been the norm, not the exception, since the late 1980s. The Hungarian environmental movement, a key player in the 1980s opposition to state socialism and the emergence of civil society in the 1990s, now plays a pivotal role in representing the larger public in GM debates. I examine Hungarian discourses for and against gene-tech from the mid-1990s to the present. While the mere fact of western European outcry against GM foods stimulated some interest in the issue, the issue only ‘came home’ to Hungarians when it was framed in terms of threats to the credibility of a prominent Hungarian-born scientist and threats to the trustworthiness of the Hungarian food supply and the country’s status as a producer of wholesome foods for the ‘larder of Europe.’

Prior to the 1996 arrival of GM soybeans on European soil, Hungarian media coverage of genetic technologies was mostly limited to the publications of environmental organisations and the specialised scientific press. The former tended to present GM issues in a negative light (and will be discussed in later in this paper), while the latter presented GM technologies in overwhelmingly positive terms of scientific progress. Pro-GM discourses remained relatively undefined in the mass media, however, until the Hungarian government developed legislation on GM as part of the EU legal harmonisation process. At that point, representatives of biotech corporations and public scientific institutes put forth a number of arguments in favour of the technology: science serving the world’s poor, scientific control of technological risks and human error, and the containment of personal risk through consumer choice and labeling. Pro-GM discourses tend to be more

homogenous and unified than anti-GM discourses, having emerged from hegemonic scientific, corporate, and policy environments with a common ‘riskocentric’ set of assumptions about technological decision-making. Relatively speaking, pro-GM discourses changed little over time.

Anti-GMO Discourses: Gene-Tech Guinea Pigs?

Anti-GM discourses in Hungary have been shaped in the interaction between social movements and the mass media. Environmental organisations were among the first to publicise and problematise GM foods and crops in the mid-1990s. In particular, the environmental group ETK began publishing translations of articles on GM technologies in the organisation’s *Gaia Sajtószemle* (‘Gaia News Review’). *Gaia* circulates widely within the environmental movement, disseminating translations of English- and German-language environmentalist essays and articles and publishing editorials and letters by Hungarian environmentalists. Four articles on GM issues appeared in *Gaia* during 1994, and coverage grew with each passing year. In the period between 1994 and 1997, articles were largely drawn from translations of articles appearing in the English-language magazine, *Third World Resurgence*, along with articles translated from *The Ecologist*, *Nature*, and *Science*. GM initially appeared as an issue of sustainable development activists from India and the global South, and as Hungarian environmentalists read essays by Vandana Shiva, Gerry Mander, and Martin Khor, they associated the new technology with ‘corporate colonialism.’

Environmentalists did not see GM technologies as an issue affecting Hungary until 1996, when the bovine spongiform encephalopathy (also known as BSE, or ‘mad cow disease’) crisis erupted and the first shipments of GM soybeans arrived in Europe from the United States. In 1997, environmental activists Márta Takács¹ began a campaign to inform

Hungarians about genetically engineered foods. At that time, I asked her why she chose to work on this particular issue. She told me that Hungarians knew absolutely nothing about the genetically engineered soy and corn products that were already entering the market. Márta believed that Hungarians should be informed so that they could examine the health and ecological risks and organise against growing and importing genetically engineered crops. She hoped that her campaign, which was kicked off by a public debate, would spur on public pressure for research and state regulations on gene technologies.

I attended an international environmental conference with Márta in June 1997 in Amsterdam. At a workshop on GMOs, she shared news and information with an environmentalist from Poland. The Polish activist related a story to demonstrate how Western European companies had taken advantage of the Poles' relative lack of environmental awareness. In the early 1990s, she told the workshop, a German biotechnology corporation developed transgenic potatoes in the laboratory, but it needed to test the new potatoes in a field trial. The company planted a field with the biotech potatoes, but local environmental activists in Germany kept digging up the potatoes at night and obstructing the field experiment. Finally, the company leased a plot of land from a Polish farmer just across the border. The biotechnology researchers were able to continue their experiment unimpeded because Polish citizens had never even heard of genetically manipulated potatoes, let alone developed opinions for or against them.

Upon her return to Budapest, Takács shared this story with members of the environmental group ETK. György Lajos, the editor of the organisation's *Gaia Sajtószemle* ('Gaia News Review'), was especially fascinated by the Polish environmentalist's story. Earlier that year, Piros had begun a series of editorials in the newsletter, 'Reports on the

Colony.’ These satirical editorials integrated current events into a dystopic science-fiction narrative in the style of Orwell or Huxley (two writers much loved by Hungarian environmentalists). Each piece in the series was presented as a corporate/colonial officer’s letter reporting to the home office on events in a new colony. Piros’ next installment in the series included a commentary on genetic technologies:

In Parliament, three representatives of the opposition criticised the progress of beneficent gene technology. They argued for ethical regulations on scientific research and spoke of philosophical and moral questions. One of them even had the nerve to suggest that importing genetically manipulated foods means that poor countries have become the laboratory guinea pigs for the rich countries. (György 1997)

The passage touches upon environmentalists’ very real anxieties about the changing political ecology of post-socialism: the devaluation of the 1980s dissident dream of grassroots political participation and the fear of slipping into the ‘Third World.’²

In conversation, Hungarian activists soon framed GM foods and crops as an example of Eastern Europe’s susceptibility to ‘eco-colonialism’ (*‘ökogyarmatosítás’*), in which rich countries dump risky products and technologies in poor countries where environmental legislation is lax and citizens’ ecological awareness is low (Harper 1999). By categorising the importation of GM technologies as an instance of ‘eco-colonialism,’ activists indexically linked GMOs with other, more familiar issues they also characterised as ‘eco-colonial’ exploitation--such as the importation of toxic waste, the expansion of the nuclear power industry in Eastern Europe, and the proliferation of consumer packaging waste from imported Western products. A Hungarian environmentalist described the specific vulnerabilities of postsocialist countries in an informational pamphlet on GMOs:

[I]t is precisely the youth and relative weakness of these democracies, and their inadequate legal regulations, that attract the multinational corporations that produce and patent genetically modified foods. (Stüber 1997/8)

The Hungarian discourse on ‘eco-colonialism’ resonates with and was shaped in part by their exchanges with other Eastern European activists facing similar challenges. A Polish environmentalist attributed the difficulty of protesting the influx of GM technologies to Eastern Europeans’ ‘information deficit’ (Kruszewska 2000).

György’s editorial also marks the appearance of ‘human experimentation’ as a discourse on GMOs in the Hungarian context, a theme that soon gained popularity in the mainstream media. ‘We are the subjects of uninvited experiments,’ stated one headline (Szabó 1999). Another journalist wrote, ‘In some people’s opinion, food made from genetically modified plants and animals is an enormous experiment in which humans are taking the part of ‘guinea pigs’’ (Fadgyas 1999). Following 1989, the theme of social or human experimentation has been used to refer to the excesses of the Stalinist period and has heavily negative connotations.³

Although some environmentalists developed an interest in the GMO issue, there was little media interest through 1997 and 1998, and the issue did not have a grassroots base (perhaps because few Hungarians knew whether or not GMOs had arrived in the country). GM issues became more public and more controversial when Hungarian lawmakers started to develop legislation on gene technology as an aspect of EU harmonisation. In 1998, with public opinion of GM foods spiraling downwards in Western Europe, the Hungarian Parliament set up an GM advisory board made up of seventeen representatives from government ministries, scientific academies, and environmental, consumer protection, agricultural, and health

NGOs. Later that year, Hungarian-born scientist Árpád Pusztai caused a controversy when he appeared on British television expressing serious doubts about the safety of GM foods—a scandal that drew considerable coverage in the Hungarian press. I discuss the Pusztai controversy in more detail later in this article.

While earlier reporting on GMOs in the Hungarian scientific and mainstream press tended to present the new technology in a favourable light, the media started to present GM foods and crops as a public risk that might not be controlled through scientific expertise. Following 1998, journalists framed GM foods and crops with greater skepticism and in more colourful terms, juxtaposing images drawn from dystopic science fiction with actual scientific projects. One article in a major newspaper, for example, referred to the films *The Boys from Brazil* and *Jurassic Park* in the same paragraph as Dolly the cloned sheep and the Human Genome Project (Szabó 1999).

In particular, the theme of plants, animals, and humans ‘jumping species’ gained popularity in the press. Newspapers reprinted the image from Greenpeace’s international anti-GM campaign, in which a cross-section of a tomato reveals a human fetus intermingled among the tomato seeds (Figure 1). In 1999 Hungarian newspapers repeatedly presented such unlikely (but actually attempted) pairings: ‘A mouse made from a man’ (Szabó 1999) and ‘snowdrop genes planted in a potato’ (Látó-Bartucz 1999). A spread in the popular tabloid, *Blikk*, led off with the following series of cross-species combinations:

Potatoes containing human hormones, tough-skinned, non-perishable tomatoes, large-bodied carp, corn built from scorpion genes, Dolly and Polly, the first artificially produced sheep, are some of the human initiatives in the test tube. All

these are examples of the latest scientific development, genetic manipulation. (Látó-Bartucz 1999)

Extending the theme of GMOs blurring species boundaries, press coverage sometimes presented the new technology as opening the door for an array of technogenic monsters. A cartoon in the respected weekly news magazine, *HVG*, for instance (Figure 2), depicted a giant potato growing all the way out of a set of doors marked, ‘gene-technology laboratory,’ crushing several scientists (Lindner 1999). A number of newspapers reported on glow-in-the-dark carp engineered in Hungarian labs (Látó-Bartucz 1999). Finally, Hungarian journalists translated the term ‘Frankenfood,’ ubiquitous in popular discourses of GM, into the Hungarian *Frankenstein kaja* or *Frankenstein éledele* (Fadyas 1999).

The Pusztai Controversy in Hungary: Science, Progress, and National Identity

After taking an early interest in accounts of the GM wars from the global South, Hungarian environmentalists framed GM discourses in terms of a naïve Eastern European public victimised by biotechnology corporations and their own naivety in the ways of public participation. This discursive strategy allowed environmentalists to participate in scientific discourses on environmental and health risks while framing their own involvement as defenders of the unsuspecting general public. Media accounts framed environmental and health risks posed by GMOs in rhetoric drawn from science fiction, pointing to the limits of scientific control. Initial coverage of GM presented the issue as a far-off concern of Indian activists and western European consumers. The growth of interest in and criticism of GMOs hinged upon two key narratives that related transgenic foods to Hungarian national identity: ‘Hungarian scientific achievement’ and ‘wholesome Hungarian food and farms.’ This essay

will focus on the former to explore how social movements, science, and national identity developed in the Hungarian GMO case.⁴

The highly publicised international controversy surrounding scientist Árpád Pusztai connected themes of food safety, progress, and national identity with the politics of scientific research and dissent. In August 1998, Hungarian-born geneticist Pusztai appeared on a British news programme and stated that, based on his research on the health effects of GM potato consumption in lab animals, he would not eat GM foods. Pusztai went on to say, ‘it is very, very unfair to use our fellow citizens as guinea pigs’ (‘Fears Erupt’ 1999). Within days, Pusztai was suspended by his research institute in Scotland, and his lab was dismantled. As Pusztai defended his decision to go public with his research findings in a popular forum, the Hungarian media and public gained interest in the GMO issue.

Hungarians take great pride in the large number of world-renowned, Hungarian-born scientists⁵: until recently, an entire hall in the National Museum was devoted to the many Hungarian-born Nobel Laureates, the majority of whom emigrated to richer countries in Western Europe or North America to do their prize-winning research.

Since environmentalists are often worried about the possible hazards caused by new technologies, they run the risk of being labeled ‘anti-science.’ Because national pride in scientists is strong, Hungarian environmentalists had every reason to fear being labeled anti-science, for it is tantamount to being branded as anti-patriotic. For example, when environmentalists lobbied for a moratorium on nuclear power in the mid-1990s, they were particularly concerned that Hungarian-born nuclear physicist Edward Teller traveled to Budapest to make the case for nuclear power (Harper 2001). Lajos György, in his fictional ‘Report from the Colony,’ expressed the concern that politicians would dismiss

environmentalist misgivings about gene-tech food would be dismissed as anti-progress: ‘The Greens and the parliamentary opposition united to demonstrate their anti-science attitude’ (György 1997). This fear was borne out in the title of a *Magyar Tudomány* article by a pro-GM geneticist: ‘Antipathy to Gene Technology—Antipathy to Science?’ (Venetiáner 1999).

The environmentalist case against GMOs, however, benefited from the association of patriotic sentiment and scientific achievement when the Pusztai controversy hit the international news. The Pusztai affair placed a Hungarian protagonist at the center of the GM drama—a drama Hungarians had previously seen as a far-off, western European concern. Pusztai emigrated from Hungary after the 1956 uprising, three years after receiving his diploma in chemistry from Eötvös Lóránd University in Budapest. Despite his long absence from the country, Hungarian media coverage consistently referred to Pusztai as a Hungarian scientist: for example, ‘Scottish resident, Hungarian Professor Árpád Pusztai’ (Látó-Bartucz, 1999: 8), ‘Scottish-resident, Hungarian-born scientist’ (‘*Génmanipuláció*’ 1999), and ‘Hungarian scientist working in Scotland’ (Lindner 1999).

Pusztai’s 1999 lecture tour to Budapest cemented his reputation in the Hungarian media as a wrongfully slandered scientist. Early in 1999, Takács met Pusztai at an international workshop on technological responsibility, and she invited him to Hungary to give a series of public lectures. Pusztai’s lectures at the Hungarian Academy of Sciences and the Budapest Technical University attracted hundreds of young scientists, students, and journalists. He won over the public by delivering his talk in perfect Hungarian, flouting the widespread expectation that as a longtime émigré who had left the country in 1956 as young man, he would have lost his Magyar fluency. Interviews with Pusztai appeared in newspapers, magazines, and on television, and dozens of articles on GMOs appeared throughout the

spring and summer in the wake of his visit. By depicting a Hungarian-born scientist with serious doubts about GM foods, the Pusztai controversy broadened the debate from a simple opposition of ‘scientific’ versus ‘political’ concerns about risks.

Pusztai’s visit to Hungary simultaneously elicited patriotic pride in Hungarian science and support for Pusztai as a scientific dissenter. His image as a dissident émigré contributed credibility to his criticism of corporate influences on scientific practice. Pusztai fled the country in 1956 to escape the political oppression of Stalinism. In interviews with the Hungarian press, Pusztai stated that he had assumed that he had escaped the problem of censorship when he emigrated, but his experience of scientific censure in the United Kingdom revealed that censorship was a problem in the capitalist West as well. In an interview with *Élet és Tudomány* (“Life and Science”), Pusztai said, “My father always told me that science is power...Power without morals is the same as in a dictatorship” (Darvas 1999: 628). By drawing a parallel between state censorship and oppression under socialism and the influence of multinational corporations on scientific research, Pusztai simultaneously touched upon Hungarians’ experience of state oppression and their apprehensions about Hungary’s entry into the global market economy. Paul Venetiáner, a Hungarian pro-GM scientist, parried this discourse by arguing that without government funding of scientific research institutions, Hungarian scientists faced a choice between accepting research support from corporations and losing more talented scientists (such as Pusztai) to ‘brain drain’ (Lindner 1999).

In 1999 the Hungarian Parliament passed a GMO law early that surpassed in stringency the European Union’s regulations. Since 2000, the Hungarian Parliament has kept its GMO laws in step with EU regulations, and coverage of GM issues remains steady in the

Hungarian media. It remains to be seen, however, whether Hungarian policymakers and producers will remain wary of GM crops after the expiration of the EU's moratorium on GM foods and crops.

Science, Social Movements, and the Making of the 'European Public': The View from Hungary

The technological controversy surrounding GM foods connects the apparently disparate worlds of social movements, the media, agribusiness, the laboratory, and governmental bodies in a struggle to express legitimately and win the support of 'public opinion.' Social movements perform several important tasks in constructing and mediating publics. They act as 'translators' within transnational movement networks, appropriating and framing issues for specific political settings. Social movements act as 'revealers' of what is excluded from official political processes, whether it is a group of people, a particular interpretation of a problem, or a potential solution neglected by policymakers. Social movements act as 'representatives' of the public interest and 'civil society' by presenting viewpoints that are relatively 'independent' of state and market forces.⁶ Finally, social movements act as 'makers and shapers' of the public—by studying and objectifying the 'public' they seek to serve and by stimulating people to become 'public' through participation in debates, demonstrations, and campaigns.

Hungarian environmentalists translated transcultural discourses against GM foods and crops from both the global North and South, and in the process, they revealed an area of decision-making in which officials had not sought public participation. The environmental movement (or at least some groups within it) took on the task of representing the public potentially endangered by GMOs. Hungarian environmentalists helped to create and to

shape public interest in biotechnology policy by circulating information about, drawing media attention to, and creating public opportunities to debate GMO issues. As they framed discourses critical of GM foods and crops, activists created and modeled a new political identity—that of a citizen who is aware of and cares about environmental and health issues, who seeks change through public discussion and participation, and who is both patriotic *and* European.

The Hungarian GM debates, then, offer a glimpse into how publics in the newest, postsocialist member states may or may not identify with and ratify European institutions. As a novel form of transnational governance, the European Union faces the problem of creating a ‘European public’—that is, establishing political legitimacy and identification from its citizens (Shore 2000). As consumers, the public ratifies the European Union’s regulatory institutions to the extent that they trust them to ensure a safe and wholesome food supply. As citizens, the public legitimises EU institutions by having ‘public opinion’ that is congruent with EU policy.

In GM debates, a ‘European public’ is indeed coming into being, but in opposition to EU policies and independently of official EU attempts to forge ‘European identity’ through cultural policy (Shore 2000). In Western Europe, at least, having an opinion on GM foods appears to be a primary characteristic of a new form of (public) life: the European citizen. GM foods emerged as an issue at the moment when Europeans’ misgivings about entry into the European Union were heightened. For many citizens around Europe, official responses to public concerns about GM foods only corroborated their fears about the ‘democratic deficit’ of European Union political processes and the loss of key symbols of national identity. Conversely, some European regulators saw citizens’ opposition to GM foods as a

problematic ‘attitude’ hindering the establishment of rational biotechnology policy (Wynne 2001, 2003).

Debates about GM foods have become a key cultural site where social movements and multinational corporations have contested notions of the ‘public’ (and especially the ‘European public’). Those conflicts take place against an emergent standard of European citizenship practices. In his analysis of the 2000 Eurobarometer survey of Europeans’ opinions toward biotechnology, Brian Wynne examines how the study normatively constructs an ideal European public whose ideas about biotechnology are driven by ‘cognitive factors,’ not by ‘emotions’ (Wynne 2003). In the Eurobarometer report, public opinion is assessed according to a hierarchy of values in which ‘content’ (scientific knowledge) rates higher than ‘context’ (eg, media accounts and ethical concerns) and in which knowledge and emotional (or ethical) concerns are constructed as mutually exclusive categories, at least within the realm of decision-making. The ideal citizen’s attitudes, according to this hierarchy, are more influenced by ‘content’ than by ‘context.’ The more a citizen’s concerns are framed in the language of science and risk assessment, the more ‘real’ their concerns appear to policymakers, or as Chaia Heller has aptly written, ‘Risk has become the euro of public debate: the single currency accepted in European discussions of agricultural trade policy’ (Heller and Escobar 2003: p. 164-5).

For citizens of Eastern Europe, any talk of ‘public awareness’ or ‘public opinion’ is tacitly linked with a whole set of normative discourses on Eastern Europe’s ‘readiness’ to join the European Union. Countries and attitudes are ordered on a hierarchical scale of ‘Euro-readiness.’ Romania is generally considered less ‘ready’ to join the European Union than was the Czech Republic, for example, and Eastern Europeans who have strongly

nationalist or ‘Euroskeptic’ political views are less ready to become European Union citizens than are their more ‘Euro-friendly’ or neo-liberal compatriots. In this discursive frame, ‘Euro-readiness’ is contrasted with ‘backwardness,’ a quality deriving from Eastern Europe’s state socialist past.⁷

As an indicator of ‘Euro-readiness,’ embracing the language of ‘democratic participation’ and ‘ecological modernisation’ is as important as rejecting violent, nationalistic rhetoric. In a 2000 report sponsored by the Austrian Ministry of Agriculture, Forestry, Environment, and Water Management, representatives of environmental non-governmental organizations (NGOs) in Czech Republic and Hungary assessed the state of environmental policy and activism on genetic engineering in those countries ‘at the doorstep of the European Union’ (‘Issues’ 2000). In the introduction, the Austrian project director writes:

A critical public should demand measures that lead towards sustainability. With the project, we intend to support freedom, human rights, and democracy—crucial prerequisites for an accession to the EU—and help to pave the way into the EU for CEE [Central and Eastern European] countries. (‘Issues’ 2000)

Eastern Europeans’ ‘readiness’ for European citizenship, in this discourse, is hindered by their purported lack of ‘awareness’ about environmental problems and experience in public participation during the socialist era (Baker and Jehlicka 1998). Along with the media, environmental NGOs would provide the information and enlightened perspectives shaping the opinion of a ‘critical public.’

In the Hungarian GM debates, anti-GM discourses drew from the language and symbols of progress and ‘Euro-readiness.’ Hungarians had not taken particular interest in the GM

debates until the Pusztai scandal. One television news program, *Dosszié*, noted that Hungarians were latecomers to the GM debate:

It is interesting that aside from this controversy, we in Hungary have not heard much [about transgenic foods]—even though the same issue has held Western European public opinion in a fever pitch for months already—*not only scientists, but the average citizen, too.* (*‘Génmanipuláció,’* 1999, italics mine)

In this soundbite, the reporter chides Hungarian public for its lack of awareness. Although some policymakers and media reports in Western Europe might present laypeople’s fears about transgenic foods as irrational, the *Frei Dosszié* reporter portrays the feverish passion of Western Europe’s ‘average citizens’ as evidence of their civic-mindedness. In the new Europe that Hungary was poised to join, technology policy was not just for experts anymore.

Conclusions

In Hungary’s debates about transgenic foods and crops, environmentalists drew on the patriotic theme of defending a native son from slander while also holding up an oppositional ‘European’ style of citizenship for Hungarians to adopt. Environmentalists allied themselves with Árpád Pusztai, a Hungarian scientist who attained professional success in Western Europe, and thus were able to present themselves as both patriotic and ‘pro-science.’ The Pusztai controversy opened up the discussion of the broader social context of scientific knowledge by exposing corporate influences on and censorship of scientific research.

Hungarian environmentalists presented their own activities—such as ‘raising awareness,’ fostering public discussion, and challenging the regulatory process--as symbols of Hungarian citizens’ ‘readiness’ to participate in European-level political processes.

Hungarian anti-GM discourses drew strength and credibility from reports of widespread (and successful) opposition to GM technologies in the UK, Italy, Germany, and France. With so many citizens of unproblematically ‘European’ countries opposed the new introduction, Hungarian transgene skeptics could convincingly present themselves as active participants in a European public debate and as civil-society defenders of democratic policymaking. In contrast, an uncritical adoption of the new technology would mark Hungarians as credulous and passive. Environmentalists and others opposed to GM foods took advantage of certain aspects of the official European hierarchy of values, even as they challenged some of its ‘riskocentric’ assumptions.

Hungary’s GM debates reveal conflicts over the role of experts and citizens in the emerging EU policy apparatus in which social movements press for expanded participation and broader consideration of social effects. While GM foods and crops are at the center of environmental debates in the European Union and around the world, responses to GM risks expose place-specific ideological deployments and interpretations of science and citizenship (Levidow et al. 2000). With the eastward expansion of a European Union gripped by controversies over agriculture and trade, we can count on learning much more about the cultural politics of food, science, and identity in the decade to come.

References Cited

- Anderson, Benedict (1985) *Imagined Communities*. New York: Verso.
- Baker, Susan, and Petr Jehlicka (1998) ‘Introduction,’ in *Dilemmas of Transition: The Environment, Democracy, and Economic Reform in East Central Europe*, eds. Susan Baker and Petr Jehlicka, pp. 1-29. Portland, OR: Frank Cass.
- Beck, Mihály (2001) ‘*A magyar Nobel-dijasok*’ (‘The Hungarian Nobel Prizewinners’), *Magyar Tudomány* 12.
- Beck, Ulrich (1989) *Risk Society*, tr. Mark Ritter. Newbury Park, CA: Sage.
- Bellier, Irène, and Thomas M. Wilson, eds. (2000) *An Anthropology of the European Union : Building, Imagining and Experiencing the New Europe*. New York: Berg.

- Borneman, J. and N. Fowler (1997) 'Europeanization,' *Annual Review of Anthropology* 26: 487-514.
- Chirot, Daniel, ed. (1989) *The Origins of Backwardness in Eastern Europe: Economics and politics from the Middle Ages until the early twentieth century*. Berkeley: California.
- Creed, Gerald, and Janine Wedel (1997) 'Second Thoughts from the Second World: Interpreting Aid in Post-Communist Eastern Europe,' *Human Organization* 56(3): pp. 253-64.
- Darvas, Béla (1999) 'Pusztai Árpád Breviáriuma' ('The Breviary of Árpád Pusztai'), *Élet és Tudomány* 20: pp. 625-8.
- Domínguez, Virginia R. (1989) *People as Subject, People as Object: Selfhoods and Peoplehood in Contemporary Israel*. Madison: Wisconsin.
- Fadgyas, Gábor (1999) 'Frankenstein étele és a Zöld Forradalom' ('Frankenstein Food and the Green Revolution'), *Népszava*, 2 June, p. 6.
- 'Fears Erupt over Genetically Modified Food' (1999) *BBC News*, February 12. Accessed online at <http://news.bbc.co.uk/1/hi/sci/tech/278354.stm>
- Fischer, Frank, and Martin Hajer (1999) 'Beyond Global Discourse: The Rediscovery of Culture in Environmental Politics,' in *Living with Nature: Environmental Politics as Cultural Discourse*, eds. Frank Fischer and Martin Hajer, pp.1-20. New York: Oxford.
- Foucault, Michel (1970) *The Order of Things*. New York: Random House.
- Gal, Susan (1997) 'Feminism and Civil Society,' in *Transitions Environments Translations: Feminisms in International Politics*, eds. Joan W. Scott, et al. , pp. 30-45 New York: Routledge.
- 'Génmanipuláció' (Genetic Manipulation') (1999), *Frei Dosszié*, television broadcast transcript, accessed online at <http://dosszie.frei.hu/>
- György, Lajos (1997) 'Jelentés a gyarmatról, 8. rész: A függetlenség már elavult fogalom...' ('Report on the Colony, Part 8: Independence is an outdated notion'), *Gaia Sajtószemle* 312, June 13.
- Harper, Krista (2001) 'Chernobyl Stories and Anthropological Shock in Hungary,' *Anthropological Quarterly* 74(3): 114-123.
- (2003) 'Green Carnivores, Mad Cows, And Gene Tech: The Politics Of Food In Hungarian Environmentalism,' *Anthropology of Eastern Europe Review* 21(1): 103-8.
- Harper, Krista, and Eeva Berglund (2001) 'Citizen Sensibilities: Comparing Grassroots Environmental Activism in Finland and Hungary,' *Anthropology of East Europe Review* 19(1).
- Heller, Chaia, and Arturo Escobar (2003) 'From Pure Genes to GMOs: Transnationalized Gene Landscapes in the Biodiversity and Transgenic Food Networks,' in *Genetic Nature/Culture: Anthropology and Science Beyond the Two Culture Divide*, eds. Alan H. Goodman, Deborah Heath, and M. Susan Lindee, pp. 155-175. Berkeley: California.

- 'Issues of Energy, Genetic Engineering, and biodiversity at the Doorstep of the European Union in the Czech Republic and Hungary' (2000) Half-time report. Vienna: Austrian Ministry of Agriculture, Forestry, Environment, and Water Management.
- Kruszewska, Iza (2000) 'The Modified East,' *The Ecologist*.
- Látó-Bartucz (1999) 'Génmanipuláció! Budapesten a Botránhös Kutató' ('Genetic Manipulation! The Scandal-making Researcher in Budapest'), *Blikk*, April 26, pp. 8-9.
- Levidow, Les, Susan Carr, and David Wield (2000) 'Genetically Modified Crops in the European Union: Regulatory Conflicts as Precautionary Opportunities,' *Journal of Risk Research* 3(3): 189-208.
- Lindner, András (1999) 'Génkezelt Élelmiszerek: Korlátlan Ehetőség?' ('Genetically Modified Foods: Unlimited Edibility?'), *HVG*, May 22, pp. 113-9.
- Melucci, Alberto (1985) 'The Symbolic Challenge of Contemporary Movements,' *Social Research* 52: 781-816.
- Milton, Kay (1996) *Environmentalism and Cultural Theory*. New York: Routledge.
- Patico, Jennifer (2003) 'Consuming the West but Becoming Third World: Food Imports and the Experience of Russianness,' *Anthropology of Eastern Europe Review* 21(1): pp. 31-6.
- Shore, Cris (2000) *Building Europe The Cultural Politics of European Integration*. New York: Routledge.
- Stüber, György (1997/8) *Génmanipuláció és genetikai környezetszennyeződés* ('Gene Manipulation and Genetic Pollution of the Environment'). Budapest, Hungary: Consumer Protection Notebooks.
- Szabó, Levente (1999) 'Génjeink Hordozzuk...' ('We are Carrying in our Genes...'), *Metro*, 28 September, p. 14-15.
- Venetiáner, Pál (1999) 'Géntechnológia-ellenesség - tudományellenesség?' ('Antipathy to Gene Technology—Antipathy to Science?'), *Magyar Tudomány* 10: pp. 1170-6.
- Verdery, Katherine (1996) *What Was Socialism, and What Comes Next?* Princeton, NJ: Princeton.
- Wallerstein, Immanuel (1976) *Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York: Academic Press.
- Wilson, Thomas M., and M. Estellie Smith, eds. (1993) *Cultural Change and the New Europe : Perspectives on the European Community*. Boulder: Westview Press.
- Wynne, Brian (2001) 'Creating Public Alienation: Expert Cultures of Risk and Ethics on GMOs,' *Science as Culture* 10(4).
- (2003) 'Interpreting Public Concerns about GMOs—Questions of Meaning,' in *Re-Ordering Nature: Theology, Society, and the New Genetics*, eds. Celia Deane-Drummond, et al., pp. 221-50. New York: T & T Clark.
- Yanagisako, Sylvia, and Carol Delaney (1995) 'Naturalizing Power,' in *Naturalizing Power: Essays in Feminist Cultural Analysis*. New York: Routledge.

¹ I have assigned pseudonyms to protect research informants' confidentiality.

2 For further discussion of Eastern Europeans' discourses on slipping "out of Europe" and "into the Third World," see Jennifer Patico 2003 and Creed and Wedel 1997. For a more detailed analysis of post-socialist political ecology, see Harper 1999.

3 Postsocialist representations of the state socialist past are riddled with medical and scientific imagery. Katherine Verdery, for example, writes about the use of the term 'shock therapy' to refer to fiscal austerity measures adopted by postsocialist governments in order to stabilise and marketise their economies. In the 'shock therapy' metaphor, Western economic advisors are presented as doctors administering strong medicine to cure Eastern Europe of the presumed madness of state socialism (Verdery 1996). Similarly, anthropologist Susan Gal discusses Hungarian antifeminist discourses criticising the 'unnatural' gender relations fostered by state socialism's social programmes (Gal 1997).

4 I discuss the theme of 'wholesome farms and foods' elsewhere (Harper 2003).

5 The list of Hungarian Nobel Laureates includes five chemists, three biologists, and three physicists, as well as an economist and a novelist (Beck 2001).

6 Elsewhere, I have examined discourses of 'independence' in the postsocialist context (Harper and Berglund 2001).

7 Scholars have discussed Eastern Europe's 'backwardness' in relation to its feudal past, its subordination to Russian and Ottoman domination, and its late industrialisation (see, for example, Chirot 1989 and Wallerstein 1976), but these sources of 'backwardness' play a minor role in popular representations of Eastern Europe.