
Module III Panel Discussion and Q&A Session

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PANEL DISCUSSION

Gregory Jaffe (Center for Science in the Public Interest, Washington, DC): [audio lost, question for Nicholas Kalaitzandonakes] Éthe surveys have lots of faults in them, but I don't see the market voluntarily addressing the ethical or social concerns that people have with genetic engineering technology.

Nicholas Kalaitzandonakes: But on the basis of what evidence can you make such an assertion? I understand that it is not exactly standard practice for the person who is receiving the question to turn it around, but, my response is that part of the problem is that we often make statements that we believe to be true, but we have very little evidence to suggest that they are, in fact, true. We do not know that markets are "failing" us and that they are not putting on the shelf the products that consumers really demand. Indeed, we don't have any evidence to argue either way. The European Union very recently said that mandatory labeling was necessary because grain traders refused to segregate GM from non-GM in response to European regulators' demands. But that's not how markets work. Markets do not respond to regulators, but to consumer demands. Limited non-GM product offerings could indicate unresponsive suppliers, but could also mean uninterested consumers. But the point is, we do not know. Let me make one point very briefly: consumers buy a variety of products every day

with more than price in mind. They take into account all kinds of factors including, convenience, quality, and socio-economic aspects. A whole host of products being offered today have explicit socioeconomic dimensions, from shade-grown Starbucks coffee to dolphin-safe tuna to non-child-labor Levi's jeans. Non-GM food is not the first product category for which we would like to see consumer preferences taken into account; but it is a big leap from wanting consumer preferences taken into account—including socio-economic preferences—to arguing for mandatory labeling. Also, it's a costly leap and it doesn't add up from a regulatory optimality perspective.

Cathleen Kneen (The Ram's Horn, Sorrento, BC): It is difficult to frame questions for these speakers. They did an excellent job. Peter, yours was the most complete and competent discussion of the issues that I have ever heard. But, I'm feeling a huge amount of frustration and maybe many of you are also feeling some frustration, and I would like to characterize that frustration as follows. Those of you who are involved in the science of biotechnology are completely convinced that what you are doing is, first of all, immensely exciting, I've heard you say that over and over again, and secondly, absolutely wonderful. And those of us out in consumer-land are just being obtuse. Where is this resistance coming from? Why do consumers insist on being so suspicious, so fearful? Following on from what Fred Kirschenmann said this morning about different models and different ways people look at the world—Peter just alluded to it as well—one of the reasons for the resistance is that people want something other than what is being presented by the dominant food system. The growth of organics and a number of other fair-trade products, and so on, are an example of that. It's important to understand that, as the food industry insists on imposing a more and more technological model, people are getting angrier and angrier. That is a message that has to be heard. So if I had a question it would be, do you recognize that anger and how do you propose to address it?

Jill McCluskey: I'm sure some segments of consumers are angry. I was discussing at lunch with someone that, at our level of societal development, it seems like we have less and less control over our lives. On the other hand, food is an area that we can take control over, and consumers are taking an increasing interest in controlling the food they eat and give their children. They are also making a political statement by purchasing food that is produced in a socially responsible manner. The media have focused on this in terms not only of food safety issues but also on social issues including fair trade. There has been a lot of coverage of Starbucks fair-trade coffee, for example. Your question was why are consumers angry and how are we addressing that anger?

Kneen: More the second than the first. I think we know the first.

McCluskey: Voluntary labeling and marketing are addressing that anger. All sorts of products have specialty labels, including aspects of social responsibility and organic methods of production. Big business is starting to realize the potential in the organic market. You'll see more and more large corporations selling side-by-side organic versions of their products. That market is going to grow as corporate America sees it as a way to make money by addressing the needs of consumers with those preferences.

William Aal (Tools for Change Institute, Seattle, WA): The issue at stake here isn't market acceptance. It's the power to determine the future—whose information are we looking for? Jill, when you chose the people to talk to in China, Japan and Norway, they were above average by your own definition. When you look at China and the impact of globalization on farmers there, you would probably get different answers to questions in comparison with high-school or college educated people in the city. If you expanded your survey to a deeper segment of the Chinese population for example, what kinds of results do you think you would have gotten?

McCluskey: We conducted the study in greater Beijing. Therefore, if we went into the countryside we would get people who were less educated and have lower incomes and probably would have a lower level of self-reported knowledge about genetically modified foods. I'm not really sure if they'd be more suspicious, more skeptical, or not. Tom, what do you think? You've traveled extensively in China. How would people in the countryside have reacted compared to the people in greater Beijing?

Wahl: Indeed the knowledge of consumers in rural areas would have been much less and I would guess the results would have shown much less premium than what we found in the city. The same trust in science would have been there. So it would have been the same direction, but probably less.

Aal: Jill, you suggested that people in Norway and Japan are perhaps closer to agricultural history and heritage. You didn't quite say it that way and that's why I was asking about China because the folks whom you didn't talk to are more closely connected to the land. We know from consumer surveys in the European Union that one of the big concerns is maintenance of family farms. Did you ask people what they think about farming, connection to the land and preservation of farms? Or did you simply ask health and safety questions?

McCluskey: We did not ask those questions. We had to get permission to conduct these surveys in grocery stores and time spent with each respondent was limited. In Norway, the survey was made in the Oslo region, so I didn't mean to imply that they were closely connected to the land or agriculture, I just

meant in general. From what I've read in the literature, Europeans are more traditional and they perceive food as high quality if it is cooked and produced in the same way as did their grandparents. In Japan, the survey was conducted in the city of Matsumoto, where relatively more people are involved in agriculture than the general population. It's a more agricultural city although not greatly so. There was a limited number of questions that we could ask, so I'm not sure how that would affect it.

Jaffe: I don't know a lot about the consumers in Norway, Japan or China, but I know that, in the United States, the food companies treat their brands as golden. Consumers buy based on brand name, be it Coca-Cola, Kellogg's corn flakes, or Kirin beer in Japan. People pay premiums for brands that they like. I haven't seen any surveys of biotech products that take brand name into account. If Coca-Cola contained genetically engineered corn syrup and was labeled accordingly, how many people would no longer buy it and switch to Pepsi-Cola or a generic alternative. I wonder how that would affect your survey results. Are you aware of surveys that take brand into account? My gut feeling is that a lot of people in the United States would continue to purchase their brand even if it was labeled that it contained genetically engineered ingredients, but I haven't seen surveys that address that. It seems to me that that is something that needs to be addressed.

McCluskey: That's an interesting point. Kirin beer for example, has refused genetically modified ingredients in order to maintain their brand reputation. And McDonalds refused to accept *Bt* potatoes. So I know that is important, and that they are trying to maintain their reputation. A branded product is a differentiated product with which the producers try to separate themselves. If it were to contain a genetically modified ingredient, it might compromise their value.

Kalaitzandonakes: Two issues: one is recognizing that branded product manufacturers and retailers have strategically responded to GMOs quite often with bans. I published on this in the April 2003 issue of *Nature Biotechnology*, so I won't go into detail here, but I will answer your question. A study done in Montpellier, France, by French researchers, takes into account the potential substitution of brands for non-GM labels. Through an experimental auction, French consumers were asked for their willingness to pay for non-GM and organic foods, unbranded and branded. When the brand was presented to the consumers, their willingness to pay for a non-GM product decreased because, in essence, the brand acted, through trust, as a substitute for the non-GM label. In the presence of the brand, consumer anxiety was reduced, in which case the premium associated with non-GM products was also reduced.

Kneen: A question for Peter. Nick commented that we've had 6 years of genetically engineered foods and not a cough or a sniffle. There is absolutely no way of knowing what the effects of GM foods on the population may be if there is no traceability because there is no labeling. You spoke very eloquently about traceability, Peter. I'd like you to comment on that.

Kalaitzandonakes: Before Peter comments on this, let me clarify what I said. I said that these are the typical pro and con arguments on labeling. I did not make any judgments on how accurate or relevant they are.

Kneen: It was in quotes.

Kalaitzandonakes: No, no—my point was that I had nothing to do with the arguments other than presenting the two sides. I don't want you to attribute that to me. I have no evidence of one cough either way.

Peter Phillips: He doth protest too much. This issue of traceability and labeling is an interesting one, and I've been engaged in it in Canada in a substantive way. The argument goes: if you don't label it, you can't detect whether it is causing a difficulty in the food system, and at one level that makes good sense. If somebody has a problem, they identify they have a problem and they say, "Oh by the way, I ate X and X must be the cause." The reality is that the epidemiological studies that look for trace-back of food-borne risk never rely on customer reported consumption as the sole determinant of causality. The labeling structure that Europe has, that we have in a voluntary way in North America, that Japan has, is almost useless for determining whether there is a risk that flows into the food chain. Let's take *Bt* crops, for example. How many *Bt* constructs do we have? Okay, we have a lot of constructs. One of them may be risky, the others may not. You need to know the exact formulations. You need to know the percentages. You need to know the provenance, which means you need the lot numbers. So, yes, you need traceability, but traceability does not need labels. In fact, labeling actually lead to red herrings, because people self-identify because of their prior views about the efficacy of the product.

Q&A

Craig Winters (Campaign to Label Genetically Engineered Foods, Shoreline, WA): My question is for Nick on labeling. It took thousands of years to 1800 to put a billion people on the planet. A hundred years, from 1800 to 1900, to put 2 billion, 1900 to 1950, 3 billion, 25 years to put 4 billion. Now we're putting a billion people on the planet every 13 years. So, population is the number-one environmental problem. There's the argument that genetically engineered foods are going to feed the planet, but people are realizing that the American culture

of increasing the consumption of meat is really a big problem. Seventy to 80% of the grains that we produce go to feed animals, and companies like McDonalds are opening up these restaurants all over the world. So there's a perception that American corporations are destroying the planet. Although we only have 5% of the population, our influence is commensurately much greater. The issue of genetically engineered foods has become a lightning rod, and for the biotech industry to say, "Sorry, you guys don't have the right to know if your food has been genetically engineered," is angering people all around the world. All these countries are adopting labeling and we in the United States are fighting it. Nick, if I was going to hire you as my consultant, as someone who understands the biotech industry, what can I do as the executive director of the Campaign to Label Genetically Engineered Foods to get the biotech industry to wake up to how deep the feelings are here. What can we do to get these labeling laws implemented?

Kalaitzandonakes: In order to get new mandatory labeling laws implemented, one must begin with the question whether the legal system has already addressed the issue. At the end of the day, you are asking, "Might we be able to label products because of consumer right-to-know?" The answer has to be viewed in the context of prior legal decisions. About 3 years ago, the FDA reviewed its GM regulatory procedures and decided that mandatory labeling—for anything other than food-safety risks—is beyond its regulatory prerogative. The courts have upheld this FDA view as appropriate. An appellate court has already decided on that in the context of a lawsuit against FDA. We also have the decision in the case of Vermont where a state installed a mandatory labeling regime, which was deemed unconstitutional because, fundamentally, there is no constitutional protection for a consumer right-to-know. So, if I'm a consultant, and since I'm not a lawyer—I'm an economist—I would go to Greg and try to get his advice as to how one might go about establishing such a legal right, fundamentally a political process. We live in a democracy. If a social group wants to pursue the establishment of a new right—one that guarantees the right-to-know—one would have to go through the political process of convincing the electorate that it represents a true issue for more than the 1% or 2% of the population who buy organic foods. Back to my original argument: how many of us feel that this really matters? Because, at the end of the day, regulation is a costly process, and whether you go through FDA or through a local government or your state government or your elections in Oregon or whatever the political platform of choice is, you have to demonstrate that it is a real issue that an interested majority cares about. Today, I don't think we have met that threshold.

Lawrence Busch (Michigan State University, East Lansing, MI): Nick, I'm a little puzzled at your argument. I thought your argument made sense providing that

you accepted what appeared to be a positive assumption at the beginning, but which was, in fact, a normative assumption. That is, you told us that governments regulate when markets fail or when it's necessary to produce equity, but of course we also know that governments do things like pass Farm Bills which pass lots of money out to people and that's a form of regulation. We just passed the Country of Origin labeling legislation, which has absolutely nothing to do with any of the issues we've been talking about here except that, indeed, it is now a new set of regulatory requirements about the labeling of food that somebody is going to pay for. It seems to me that what you've been arguing—that we have to show that regulation is efficient—and that that might be a nice normative argument, that is to say an ethical argument that an economist might want to put forth, but one could just as easily make a different normative argument and say that the costs be damned, we should label it anyway.

Kalaitzandonakes: Is cost-benefit analysis—which is what we are talking about here—a necessary and/or sufficient condition for regulation? The answer to that is: it is not. Indeed, there are laws in this country that explicitly prevent cost considerations in certain regulations. But, it is my opinion that cost-benefit analysis would serve us very well as a society when we consider alternative regulatory regimes. There is a substantial body of literature that refers to the political economy of regulation, which deals with the issue of minorities that can hijack the process for their own purposes. So, without consideration of demonstrable benefits vs. regulatory costs, if we don't deal with that criterion, whether it's positive or normative, we could be failing society at the end of the day.

Phillips: Let me add one other thing that you have to keep in mind. This debate isn't happening in a vacuum. All of our nations are members of various international organizations that have rules of engagement. One of them is that you can deviate from the norms established under the WTO, for example, but you A) must have a legitimate objective, B) the objective you are trying to meet actually must be relevant to the measure you adopt, and C) it must be done in the least trade-distorting way. So precedents are set that are in all of our best interests to ensure that we go through the motions, even if we are going to choose to not accept the results, but so we know how far we are deviating from norms that we've established for international governments.

John Browne (Judd Creek Nursery, Burton, WA): I have a simple question for Peter on your note about 3,000 Canadian oil-seed growers for 250,000 farmers. Can you put that in a historical context?

Phillips: I'm talking about the certified seed growers that are the registered and licensed agents to multiply the foundation and certified seed for the commercial

trade. They are a small group. They already practice identity-preservation to ensure quality standards of product entry in the market. If you are talking about the aggregate industry, about 20% of the people we used to have farming are still farming, and farms have tended to become much more sophisticated and specialized in terms of what they produce. There is a much narrower range of products, and we've moved into the higher value-added quasi-differentiated commodity markets.

Browne: So the differentiation then is a self-regulating thing as opposed to the old model where the farmer who produced kept his own seed.

Phillips: Yes, we have a variety of different differentiation models. Some are publicly regulated. We still have the Canadian Wheat Board which does a fair bit of the product differentiation. We have commodity groups like the Canola Council, which owns the standard. A variety of mechanisms are being used.

Robert Wager (Malaspina University College, Nanaimo, BC): This question is for Nick mainly, but Peter may have some answer to it. When you were discussing the four areas of cost-benefit considerations, you said that you wouldn't talk about the integrity of the labeling system and you passed over the high integrity. I think we all appreciate the trust we put in the validity of labels right now, knowing that about 70% of our foods have at least one GM ingredient, although in many cases the levels are too low or they are too highly processed to be detected. What will it do to the high level of integrity of the labeling system if food is labeled as "GM" when the GM component cannot be detected?

Kalaitzandonakes: The work that I quoted considers the issue of the integrity of the labeling system as one of the factors that determines the benefits of any such system. If consumers do not believe in what labels say, then, obviously, the benefit or the utility to the consumer from such labels decreases. If the integrity of the labeling system is compromised, then mandatory labeling implies fewer social benefits. If we look at the system we are putting in place today—including testing procedures through non-standardized methods, thresholds that cannot be accurately measured or assessed and so on—problems are likely to emerge. Adding the issue of traceability, when one cannot analytically assess the presence or absence of GM ingredients in certain products like feed, oils and highly processed foods, then it's anybody's guess how that system will work. Obviously, if the integrity of the labeling system is affected, the benefits for mandatory labeling are compromised, which, in turn, argues against mandatory labeling regulation.

Wahl: Peter, did you have anything to add?

Phillips: People care about the provenance of certain products, but it may be impossible to determine whether a declaration is honest or not. Sometimes those are branded products. Sometimes those are collectively-managed-standards products, as in the organic industry. Sometimes they are managed by outside authorities—halal and kosher foods are good examples. There is a tendency in the debate around GM foods to iterate towards a single consistent unified standard for labeling and declaration of content, and at times I've thought that's not a bad idea. Increasingly I am questioning that view. There isn't one reason we want the stuff labeled; there are multiple reasons and what people want labels for should perhaps determine why they are there. Let me give you an example from some research we are doing. Not being Jewish, I assumed that kosher is kosher. In fact, within North America there is a number of rabbinical councils and something like 3,000 differentiable kosher standards that vary marginally based on the community and the rabbi who is the authority. Would anybody argue that that's a market that is not functioning? This is an illustrative example of where we need to start thinking about how we actually mediate the exchange between the production system and consumers. Different parts of this state, this country, this continent and this world, want products labeled for different reasons and the labels almost by definition have to be different. The desire to go for a standard that is consistent may be counter-productive in the long run. It will generate a lot of legal activity, but not necessarily much consumer acceptance.

McCluskey: I've done research in this area on credence goods, which, as Nick discussed, are those for which, even after being consumed, quality is not verifiable. So the ability to support an equilibrium where high-quality credence goods are available depends on the probability of getting caught, because there is economic incentive to cheat if there is a premium for, let's say, a GM-free product or if the GM item is less costly to produce. It also depends on possible effects on product reputation. For example, the presence of StarLink^a corn in their taco shells must have hurt Taco Bell's product reputation. Adverse effects on product reputation and price may be long term, and it depends on discount rate and on how much future profits are valued, which depend on the degree of damage. So, if there is a sufficiently high probability of getting caught and they care about the future, then we could have true labeling.