STATEMENT ON BIOTECHNOLOGY: A DISCUSSION OF FOUR IMPORTANT ISSUES IN THE BIOTECHNOLOGY DEBATE*

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I appreciate this opportunity to talk about the rapidly evolving issue of biotechnology. Specifically, I would like to discuss four related issues: (1) the role that cultural differences play in guiding countries' decisions regarding genetically modified food products; (2) the risks and benefits of biotech agriculture; (3) the utility of labeling; and (4) how the biotechnological debate affects the larger environmental discussion.

The first question is whether cultural differences should guide us, despite where the science lies. Dorothy Nelkin, professor of Sociology at New York University, has offered what I think is an extremely provocative proposition: imagine that science stipulated that genetically modified food posed no risk to human health. What would be the consequence of such a stipulation? Would that end the current debate?

I suspect that the argument would continue. People differ. In this area, as in other international areas such as trade negotiations, countries must have an escape hatch attitude that says essentially: "I do not care what the rules are; on this point I will not budge." This attitude is perhaps a more honest approach than attempting to write a rule, in the WTO or elsewhere, that accounts for the fact that a country may have a real, but unquantifiable, unverifiable, non-science-based aversion to a certain product.

In some ways, this aversion is similar to France's aversion to cultural importation. The French have every right to be worried about the infusion of foreign cultures; but writing a rule in an

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international trading system that permits countries simply to say: "I do not want it because my culture says I do not want it," while simultaneously maintaining an otherwise rule-based trading system, is very difficult.

There is an array of values to consider here—human health, environmental protection, cultural values—but another value that we should embrace globally is a rule-based trading system that countries think is fair. Many countries, not just developed countries, have benefited from this system. It is not a perfect system by any means, but I am unaware of another way to administer an integrated world without potentially creating huge trade disputes.

The second issue concerns the question of risk and the ultimate benefits of biotech agriculture. First, I think it is extremely important that we differentiate between the risk to human health and the risk to the environment, and not muddle them up. I recently asked the National Academy of Sciences to put together a seminar for United States officials from the State Department and elsewhere, so they could learn from some of the leading scientists in the relevant fields about the risks of genetically modified food products. I came away with several conclusions.

One conclusion was that no evidence exists of risks to human health. Another conclusion was that there are real environmental risks, and that they need to be taken seriously and managed. Perhaps it can be concluded that, in some cases, they cannot be managed. Nevertheless, I think that management, not exclusion, is where the focus should be. Finally, I learned of the benefits of biotech agriculture.

For instance, if our agricultural practices today were no more efficient than they were thirty years ago, we would need six percent more of the Earth's surface to grow the food we now require for our larger population. From an environmental point of view, we should find ways to use less land to feed our population. The reason, as one scientist, Peter Raven, bluntly put it at a National Research Council briefing for the State Department, is that agriculture kills. From a biodiversity point of view, agriculture is destructive because it is designed to grow one thing and kill everything else. So the less land used for agriculture, the more biodiversity is preserved. Nevertheless, genetically modified agriculture's benefits to biodiversity are something I have

not heard much about from the press, and to be honest, from the environmental community.

Naturally, everyone wants to have safe food, but I am most puzzled about why genetically modified food gets so much attention. Why don't those who rail against biotechnology extend their aversion to all non-organic agriculture? Has someone made an evaluation that the use of pesticides and other chemicals in non-organic food is less problematic than genetic modification? I doubt very seriously that one could prove such a thesis and I doubt anyone has tried. It is very difficult to manipulate attitudes of risk, and my concern is that if we stray from the strictest possible science-based analysis, we are entering very dangerous territory.

The third point concerns labeling. There has been some discussion about whether labeling would improve food safety. The initial attitude of some of us was that we ought to label food products that are really different. But, if there is no nutritional difference between the two products, then a label on only one could be not only non-informative, but actually misleading. While I think the argument is still valid, I sense that consumers have spoken, saying, "we want this stuff labeled." My guess is that whether it improves food safety or not, it is going to be hard in the end to avoid satisfying the consumer's demand to know.

Finally, I want to talk about how the debate about biotechnology affects the larger environmental discussion. The first case in which the GMO debate has colored the larger environmental discussion concerns the precautionary principle. The 1992 Rio Earth Conference first introduced the precautionary principle, or as we in the in the U.S. Government refer to it, the precautionary *approach*. It posits, roughly, that one should err on the side of caution when presented with evidence that a particular product or process may be dangerous, even when that evidence is less than conclusive. The environmental community has wanted and should want the precautionary principle to become part of the ethos of international discourse more generally. However, the use of the precautionary principle in the Biosafety Protocol discussions by those who, in our opinion, make a special case for bio-engineered food without a scientific basis for that case has, I think, caused a backlash in several countries. The term "precautionary principle" is now looked upon in those countries as a risky proposition that opens the door to a lot of mischief.

The second effect is in the relationship between Multilateral Environmental Agreements ("MEAs") and the World Trade Organization ("WTO") disciplines. The environmental community has for a long time, wanted to have some protection of MEAs against the charge that the exercise of trade measures under an MEA would be treated as a violation of a WTO obligation. At the Singapore WTO Ministerial, this was the most important protection that the environmental community wanted, even though there has never been a case where an MEA action was ruled a violation of a party's WTO obligations. It is one thing to be concerned about the relationship between the obligations under an MEA and the WTO, but to say, as some have, that MEAs have to trump the WTO's obligations across the board, I think, has created something of a backlash.

The third point is that representing the environmental position inside government, and in our society is difficult, especially when you have the sloganeering and sound-bite argumentation that we have in American politics. That is not the standard we want to achieve on an issue of great complexity. I refer again particularly to the question of science-based statements on the risk to human health of genetically modified food.

Finally, in other discussions in the New York University Colloquium on Genetically Modified Organisms about the WTO forum, some participants indicated surprise that developing countries were somewhat hostile to the WTO and to introducing environmental considerations into the WTO. On issues of trade and food safety, the WTO and Codex Alimentarius are the only forums with any power; so, we have to be intensely practical in asking ourselves whether our objective is to blow them up, make them work, or develop a brand new regime that would, in fact, improve existing protections for both the environment and health.

I am not sure I have all the answers, but I will say that, pending the birth of some new institution, making the WTO more responsive to the needs of the environment ought to be a very high priority for those who are concerned about the issues we are talking about. This is a very difficult proposition because most developing countries want nothing to do with the WTO. The question is, if we cannot make the WTO more responsive, then what is the alternative? Is it going to be some other yet-to-be-invented body that will be able to do it any better? How would

its decisions relate to the WTO's decisions? These are hard questions, and it is not at all clear to me that the environment would come out on top in such a scenario.

I posit that the WTO, especially in its dispute settlement decisions at the appellate level, has been reasonably sensitive to the proposition that there are considerations that must be taken into account other than trade liberalization. What we are trying to do is make the WTO into a body where these issues can be dealt with in a way that protects not only trade concerns, but also our environmental and health concerns. I am relatively more optimistic than pessimistic about the possibility.