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Labeling Genetically Engineered Foods

Rights, Risks, Interests, and Institutional Options

Clark Wolf

In 2002, a ballot initiative was introduced in Oregon that would have required that foods containing genetically engineered (GE) components bear a label. Oregon's Measure 27 was both broad and specific: It would have required labeling for "all foods derived in whole or in part from any genetically engineered microorganism, plants or livestock, if that genetically engineered material accounts for more than one tenth of one percent of the weight of the product," as well as for all foods prepared with the use of GE enzymes (whether or not these enzymes were present in the final product), all foods derived from GE inputs, and all meat and dairy products from livestock that had been fed feed with GE-derived ingredients. The measure further required that very specific information be included on the labels themselves. It required that "foods resulting from trans-species gene transfers" must specify on the label the "source of the transgene used, and the purpose of the transfer. For instance, 'This squash contains viral genetic information designed to make it resistant to viral infection.'" Where the process of genetic engineering involved the importation of animal genes into plants, the Oregon initiative would have required that the source be clearly identified to allow "vegetarians and those with dietary religious restrictions [to] observe their dietary guidelines. For instance, 'this tomato contains genetic material derived from the flounder, a fish of the family Bothidiae.'"[1]

Oregon's Measure 27 initially received enthusiastic support from some Oregonians. It also caught the attention of the FDA and the biotech industry. In October 2002, Lester Crawford, then Deputy Commissioner for the FDA and former director of Georgetown University's Center for Food and Nutritional Policy, sent a letter to Oregon Governor Kitzhaber, noting FDA objections to the measure. Crawford's (2002) letter emphasized the FDA's scientific judgment that "there is no significant difference between foods produced using bioengineering, as a class, and their conventional counterparts." He also noted that the Oregon labeling initiative would not conform to the FDA's traditional standards for labeling and suggested that "the proposed legislation would impermissibly interfere with manufacturers' ability to market their products on a nationwide basis" and that it would impede "the free flow of commerce between the states." Biotechnology corporations weighed in with the power of the purse. By some estimates, biotech

corporations spent $5.3 million in their effort to defeat this initiative, compared with the $200,000 spent by advocates (Donohoe 2003). When Measure 27 was defeated, with 73% of Oregonians voting against its implementation, some charged that the outcome had been purchased with corporate cash. Others breathed a sigh of relief.

Should we be relieved or disturbed by the failure of Measure 27? The question is not simply an academic one. Other relevantly similar legislative measures are currently under consideration, such as the 2005 Genetically Engineered Food Right to Know Act, sponsored by California Representative Barbara Boxer and Ohio Representative Dennis Kucinich.[2] This chapter examines some of the considerations that are relevant for the evaluation of proposals to institute labels for foods containing (or produced using) GE agricultural products.

LABELING GE FOODS: THE POLITICAL PREDICAMENT AND THE LIKELY EFFECTS OF LABELING

It is valuable to keep clearly in mind what the likely consequences of a labeling regime would be: What effect would different labeling regimes have on consumer demand? Whose interests would be advanced, and whose set back, by different labeling regimes that might be implemented? Once these have been considered, we then examine whether any of those whose interests would be set back have a right or a valid claim against those who might implement such a regime that should effectively defeat such a proposal. This way of proceeding allows us to keep separate the different kinds of morally relevant issues that come to play in this context. In considering alternative proposals, it is also valuable to identify different institutional options we might implement and to consider separately the welfare and rights implications of each one.

I note from the start that I am not persuaded by those who urge that the consequences of implementing a labeling regime would be terrible. Given evidence concerning consumer preference for alternatives that do not contain GE ingredients, one might reasonably predict that such a regime would lead to slightly lower prices for some food commodities—those bearing labels indicating that they contain GE materials—with a concomitant but larger rise in the price and availability of food products that are "GE free." Given the relative size of the organic and conventional food markets, the advantages would likely be focused on the relatively smaller number of organic producers, while the disadvantages would probably be minimal and spread out among a large number of conventional producers. Thus, we might expect to see a significant benefit for organic and non-GE producers and a slight cost, in terms of forgone profits, for producers who grow and market GE food crops.

If the effect on conventional production were more severe than this, one might expect that it could set back research in plant and animal biotechnology, with associated opportunity costs that are difficult to measure. While some people believe that biotechnology holds the richest opportunities for the future, others regard it with distaste and horror. Some are afraid that our venture into biotechnology and genetic engineering will lead to disaster. Obviously, people with these

different views of biotechnology will have a different view of the opportunity costs associated with a setback in biotechnology research. Since different views of this question are deeply informed by the fears and hopes people bring to the issue, it is only fair to place my own potential biases on the table: My own view of these costs is informed by my hope that biotechnology may improve agriculture and perhaps move existing agricultural institutions closer to a sustainable system. For this reason, I judge that the opportunity costs may be significant and that a setback for biotechnology research would be a matter for concern. But this concern is mitigated by consideration of the present direction of research in plant biotechnology, which has in many ways fallen short of its promise to improve the unsustainable agricultural practices that have become traditional in the American Midwest and many other parts of the world and are rapidly spreading elsewhere. In the absence of appropriate incentives, biotechnology research can be expected to follow market forces, and the existing market forces have rewarded large farms with intensive inputs. The environmental costs of contemporary agricultural practices are significant, and these costs are already coming due. As in so many other areas, we are engaged in long-term deficit spending for which costs will fall on subsequent generations. Of course, these problems cannot be entirely attributed to biotechnology, but thus far, biotechnology has not delivered on its promise to provide us with a more sustainable and environmentally appropriate agricultural system.

It is unlikely that a food-labeling regime for GE foods would have disastrous consequences. It is also unlikely that our failure to implement a food labeling regime would have disastrous consequences. For the purposes of my discussion here, I set aside arguments that would focus our fears on the possibility of extreme consequences and instead focus on the rights and interests that might be affected by such a regime.

A MELIORIST STRATEGY FOR POLICY ANALYSIS

In judging whether it would be appropriate to institute a labeling regime for GE foods, I suggest that we adopt a *meliorist* strategy: Instead of noting the ways in which the status quo fails to satisfy all relevant ideals, we need to evaluate alternative policy proposals and to judge them according to the extent to which they might constitute an improvement on the status quo. This strategy has the benefit that it directs our attention to concrete steps that we might reasonably take, instead of directing us toward an unachievable utopian ideal. For the meliorist, a labeling regime is justified only if it would respect and secure relevant rights and advance relevant interests at least as well as the status quo or the next best alternative, and as long as the costs of transition and implementation are not so great that they would counterbalance the benefits that might be achieved. In addition, a successful policy proposal should embody the least restrictive and least costly means to achieve the goals that are identified as the policy's aim.

In this chapter, I begin by considering the rights and interests that are relevant to evaluating proposals to implement a labeling regime for products with GE

ingredients. I consider different institutions that might impose such a regime, and adduce arguments concerning the authority of the FDA and of state and federal legislatures to implement a requirement that GE-containing foods must be labeled.

BY WHAT AUTHORITY?

All too often, discussions of labeling are put in broad, abstract terms. But we cannot ask whether GE foods should be labeled in the abstract. In posing the question, we need to consider specific agencies and their respective rights and obligations: What specific agency or institution (if any) should create and regulate a labeling regime that might be put in place? Different arguments and considerations apply to different agencies. Those who urge that we ought to have a labeling regime must also be specific about what this means. Should we have good reason, as citizens, to work toward the implementation of such a regime? Should legislators (which legislatures?) have a reason, or perhaps even an obligation, to frame and promote legislation that would accomplish this aim? We may be grateful to Robert Streiffer and Allan Rubel (2004) for putting the issue quite clearly and for urging that we cannot discuss the obligation to impose food labels in the abstract. Following Streiffer and Rubel, I consider separately the possibility that the FDA, state legislatures, or the federal legislature might institute a labeling regime for GE foods in the United States. For each institution, we need to consider the possibility that that institution might have an *obligation* to implement labeling, or whether it is *permissible* for that agency to do so. To say, for example, that it is permissible for the FDA to implement a labeling regime is to say that the FDA may do so without violating any obligations.

Finally, we must consider the nature of the regime that might be put in place. While there are innumerable different ways in which labeling might take place, in this chapter I consider only two alternatives: A *positive* labeling regime would require that products containing material from GE crops must be labeled as such; a *negative* labeling regime permits labeling of products that do *not* contain material from GE crops. Negative labeling might be *tolerated*, or such labels might even be facilitated and administered by regulatory institutions.[3]

This division yields 12 separate questions that need to be answered if we are interested in the issue of food labeling. Each of the 12 entries in table 10.1 corresponds to one such question. For example, entry 12 represents the question whether it is permissible for the federal government to implement a negative labeling regime. It would be a mistake to think that this table includes all of the possible questions and alternatives. Other institutions might take it upon themselves to implement a labeling regime, and we might consider in addition to the 12 questions in table 10.1 whether independent organizations may permissibly implement and enforce their own labeling regime. If we find that it is permissible for some agency to implement a labeling regime, but also permissible not to do so, we might still meaningfully ask whether there are good reasons for it to exercise that option.

Table 10.1. Questions about Food Labeling

Obligation/Permission	Obligation	Obligation	Permission	Permission
Positive/Negative Labeling Regime	*Positive*	*Negative*	*Positive*	*Negative*
FDA	1	2	3	4
State Government	5	6	7	8
Federal Government	9	10	11	12

Each of the 12 entries in table 10.1 represents an independent question, and a full answer to the question whether we should implement such a regime would require that we consider each of these questions. Fortunately, we do not need to consider them separately, since they are conceptually related. For example, if we were to conclude that it is impermissible for the FDA to implement a positive labeling regime, this would imply that the FDA has no obligation to implement such a regime. In this chapter I do not consider each question (each entry) separately, but instead consider only the most likely candidates. As a preview, I include in table 10.2 the conclusions I tentatively draw concerning the propriety of implementing a labeling regime.

As indicated by table 10.2, I am unpersuaded that any of the institutions in question has an obligation to implement a labeling regime, positive or negative. I note some reservations, however, about the possibility that the FDA has no obligation to implement a negative regime. While I argue that it would be impermissible for the FDA to implement a positive regime, I urge that there are good reasons in favor of an FDA-monitored negative regime. The best outcome, as I urge below, would be for the FDA to exercise this permission by creating and enforcing such a regime. As I argue, not only is it permissible for the FDA to regulate negative labeling, but also there are good moral and institutional reasons for the FDA to exercise this permission. But one might still reasonably doubt that failure to exercise this permission would not create wrongs or violate rights.

State governments are a difficult case, and I devote little attention to them in this chapter. In the United States, state governments are semiautonomous

Table 10.2. Tentative Conclusions about Food Labeling

Obligation/Permission	Obligation	Obligation	Permission	Permission
Positive/Negative Labeling Regime	*Positive*	*Negative*	*Positive*	*Negative*
FDA	No	No?	No	Yes
State Government	No	No	Yes?	Yes
Federal Government	No	No	Yes?	Yes

democratic regimes. They have broad latitude to legislate policies that have sufficient democratic support, and there is reason to believe that food labeling would be a policy that would attract broad support in at least some states and perhaps in most of them. There is reason for concern, however, that the federal courts might step in to prevent state governments from implementing a positive regime, because such a regime raises constitutional questions concerning free expression and interstate commerce. While I do not find these constitutional arguments to be conclusive, I note that they constitute a significant reservation concerning the right of state governments to implement such a regime. It is fully permissible, I urge, for state governments to implement a negative regime, and there are in addition good reasons for them to exercise this permission.

The U.S. Congress is quite at liberty to implement a positive or negative labeling regime, and while the constitutional reservations mentioned above could be a barrier to the actions of Congress as well as to the actions of state governments, Congress has at its disposal the democratic means to overcome any such constitutional obstacle. Whether it would or should exercise these means is another question. In particular, the fact that a majority of citizens report that they would like GE food to be labeled is not a sufficient reason for Congress to implement a labeling regime.

WHOSE INTERESTS ARE SERVED AND SET BACK?

What interests would be served by a labeling regime, and who would be likely to oppose the implementation of such a regime on grounds that it would set back their interests?

First, there are the interests of consumers who by most accounts are overwhelmingly in favor of positive labeling proposals when they are asked about them.[4] Since people have an interest in the implementation of policies they support, a labeling regime would directly serve this interest. It is sometimes argued that labeling would serve consumer desires but not their interests, since many concerns about GE foods may be based on false beliefs or misinformation about their safety. Two considerations are relevant in evaluating this charge. First, the argument supposes that consumer dispreference for GE foods has its basis in the false belief that these foods are dangerous. While it may be true that many consumers have this fear, it is clearly not the only cognitive basis for this widespread preference pattern. If the consumer preference for non-GE alternatives were based on simple lack of information, it should be expected to disappear when consumers are provided with appropriate scientifically based information about the safety of GE foods relative to their non-GE competitor products. But, on the contrary, evidence suggests that consumer preferences do not change when they are provided with this information, and that consumers who know more—at least, those who know *a little bit* more, though who are still less than experts in biotechnology—are more, not less, skeptical about GE foods (Comstock 2000; Streiffer and Rubel 2003). The second response to the view that labeling serves consumer desires but not their interests simply insists that people must, in most

standard circumstances, be regarded as the best guardians of their own interests. The attempt to supplant people's expressed interests with the interests others believe them to have is, at best, unacceptable paternalism. At its worst, it is oppressive exploitation.

Another class whose interests would be advanced consists of producers who grow or sell non-GE competitors to foods that would be labeled. On the assumption that consumers would regard the label as the mark of an economically inferior product, more consumers would move consumption to the organic and non-GE food market, increasing price and demand for non-GE products. Not all non-GE producers are small farmers: Organic agriculture is often just as heavily industrialized as traditional agriculture. But small producers often manage to stay economically afloat by catering to niche markets, and it is much easier for small producers to change their mode of operation to meet local market demand. There is thus some reason, though less than conclusive, to predict that an increase in demand for non-GE products might provide disproportionate benefits for smaller over larger producers.

Whose costs? Those likely to be disadvantaged by a positive labeling regime would include producers who grow GE crops, since demand for their product would be lower. On the assumption that a labeling regime would reduce demand for GE products, it would also be disadvantageous to people and corporations engaged in research to produce improved GE crops. One might reasonably predict, however, that only a rather small subset of the consumer population would change their purchasing habits if a labeling regime were put in place.[5] If this is so, then this provides additional support for the claim that a labeling regime would have focused benefits for the relatively smaller class of non-GE producers. The markets for organic foods and those for foods produced on small independent farms are somewhat different, since many organic farms engage in large-scale industrial agriculture.

LABELING AND RIGHTS

A labeling regime is permissible only if it violates no rights. By parallel reasoning, the status quo, with no requirement that foods containing GE components be labeled as such, is justifiable only if it violates no rights. But where legislative chance is under consideration, rights cannot be cited in the abstract: We need an account of exactly which rights are relevant to the labeling issue, and we need a clear understanding of their scope and limits. Four rights are most commonly cited as relevant to discussions of food labeling: (1) the "consumer's right to know" what is in their food; (2) the "right to autonomy," which is regarded by some as a background right that explains why consumers have a right to know, at least in this case, what they are purchasing and consuming; (3) the "democratic right" of self-governance, which has sometimes been cited as a reason why citizens have a right that their legislators put in place a labeling regime; and (4) the "right of free expression," usually understood to include the right not to express views with which one disagrees. This last right has sometimes been cited as a reason why producers

cannot be forced to state that their product contains GE elements. In an interesting case, U.S. federal courts referred to this right in overruling Vermont's state labeling law for milk produced by cows given the growth hormone recombinant bovine somatotropin (rBST).

Consumer's Right to Know

Advocates of labeling often assert that consumers have a right to know what they are buying. Consider the following from the Consumer Union:

> Consumers have a fundamental right to know what they eat, and federal officials should require that all foods containing genetically engineered ingredients be labeled as such, including milk with recombinant bovine growth hormone. Regulatory precedent favors labeling.... [I]f the agency says that consumers should know whether their orange juice is fresh or from concentrate, why shouldn't they know about genetically engineered food? (quoted in Goldman 2000)

United States law contains no legal provision guaranteeing consumers the right to know the components of the food they eat. For example, consumers who purchase products guarded by trade secrets do not have a right to know the recipe for the product they consume. So if such a right exists, it must either be a *moral right*, or it must be a legal right that is implicit in other rights that are legislatively protected. A consumer right to know might be analyzed in different ways. In one sense, a right to know what one is purchasing might simply imply that one has a right not to pay for something unless one's questions about it have been answered. This interpretation of the right to know provides no special protections for consumers, but neither does it restrict their liberties. On a second interpretation, a right to know might be understood to imply that it is impermissible to sell an item unless one discloses everything one knows about it. This interpretation places a significant burden on sellers and may imply burdens for purchasers, as well, since the associated obligations might prevent people from placing some items on the market at all.

A third interpretation of a consumer right to know might imply that sellers have an obligation to disclose certain things that are true about the products they sell and would forbid sales contracts that did not include disclosure of these truths. Like the other interpretations, this interpretation could impose restrictions on purchasers as well as sellers, since purchase would be forbidden where disclosures were not made. But where sellers do not know the relevant properties of their merchandise, this interpretation would prohibit sale even if the seller has disclosed everything she knows about the item, and even if the buyer is willing or eager to take any associated risks. Secondary effects of such a regime could also be disadvantageous for consumers as well as sellers, since it might result in fewer items on the market and might cause an increase in the price of those items that are on the market because of the costs associated with gaining and disclosing information. The issue is relevant to the case at hand, since those who sell processed foods are often ignorant of the contents and ingredients and may have no idea whether the product they sell contains ingredients from GE sources.

A less restrictive and more reasonable solution would simply require that sellers frankly admit when they do not know whether the products they put on the market do or do not contain ingredients from GE sources. The proposal that such items bear labels indicating that "this product may contain GE ingredients" would serve this purpose.

Whether consumers may plausibly be understood to have a right to know the properties and ingredients of the items they purchase will depend on how this right is articulated and on precisely which claims, liberties, and powers this right is understood to contain. It is worth emphasizing that the "right to know" could be elaborated in ways that would restrict the liberties and claims of consumers as well as sellers and that it might be disadvantageous to both. If the "right to know" is simply an assertion that sellers have an obligation to disclose the presence of ingredients from GE sources, then we cannot simply assert a priori that consumers possess this right. If they do, then this right must be defended as the *conclusion* of an argument about the different morally relevant considerations that come in to the labeling debate; it cannot be inserted as a premise in such arguments (Buchanan 1987: 566–567).

The Right of Free Expression

Courts in the United States have ruled that food labeling can violate the right of free expression. Constitutional guarantees of free expression include a right not to speak as well as a right to speak. If producers are required to put labels on their products identifying them as containing GE ingredients, one might regard this as a requirement that producers *affirm* the message communicated by the label. In *International Dairy v. Amestoy* (1996), the U.S. Second Circuit Court found that Vermont's statute requiring labels for milk that came from cows treated with rBST violated the free expression rights of producers, who did not want labels on their product. The court ruled that the Vermont statute (Ct. Stat. Ann. Tit. 6, § 2754(c)) violated producer's right not to speak. We should not assume that the court was right about this: It is by no means obvious that labeling a product involves any implied accession or expression by the seller or the producer. But in a full discussion of this issue, it would certainly be necessary to consider whether a labeling regime would raise a conflict with the right of free expression.

Democratic Rights of Citizens

Democratic rights include our right to vote and our right to institutions that are appropriately responsive to democratic expressions on the part of citizens. Democratic rights, however, are typically more restrictive since only *citizens* of a state are typically regarded as having a right to have an opportunity to express their preferences by exercising the right to vote. Democratic rights are best understood as rights to institutions of a certain sort: institutions that are responsive to democratic processes and that reflect collective decisions that are made, in some sense, in accordance with the will of the majority (Rubel and Streiffer 2005: 83; Rawls

1999, 196–197; Rawls 2001). The democratic rights of citizens do not include a general right that citizens' desires and ideals must be satisfied, or even a right that preferences or ideals shared by a majority of citizens must be satisfied by public institutions. But it does include citizens' right to vote, and a right of access to public institutions including legislative institutions, which must be appropriately responsive to public preferences and ideals.

The Right to Autonomy

In one sense, it is misleading to identify the right to autonomy as simply a right, alongside other rights we might enumerate. Just as Aristotle's "complete virtue of justice" includes all of the other virtues discussed in the *Nicomachean Ethics*, the general right to autonomy is sometimes understood to be a general right that encompasses all the other rights we possess.[6] To possess a right, in one sense, is to have a claim to make one's own decisions within the context where one's rights rule supreme.[7] In this sense, all fundamental rights may be understood as claims that protect individual autonomy.

In its most general sense, autonomy refers to the ability to direct one's own life with one's own decisions and choices. It is regarded by many theorists to be among the most basic and fundamental human values and the most basic and fundamental of all human rights. While courts have found no specific right to autonomy in the Constitution, many scholars understand a basic right to autonomy to be implied in the Constitution. There are different ways in which one might understand the concept of autonomy, and this is not the place to engage in a full-scale conceptual analysis of this important term (see Dworkin 1988; Feinberg 1986: Ch. 18). But it is relevant to distinguish two important senses of autonomy, since the concept has been cited as a basis for the other rights mentioned above. For our purposes here, I distinguish one sense of autonomy as a *capacity* and contrast that conception with an alternative conception of autonomy as a public right, guaranteed by principles of justice.

Autonomy as a Capacity

Different individuals can direct their lives to different degrees. While public institutions can significantly influence people's ability to do so, some limitations on people's capacity to direct their lives are simply beyond the purview of public right. For example, public institutions can protect people from discrimination and can guarantee that appropriate accommodation is made for people with disabilities or other special needs. But it is not possible to ensure that everyone's life will be maximally autonomous, and there are some barriers to autonomy that the state has no authority to prevent. Further, people have a right to restrict their own autonomous capacity by making contracts, by voluntarily taking on risks, and by taking on legally enforceable noncontractual obligations. In this sense of the term, "autonomy" is a matter of degree, and it is not always the business of the state to interfere when people's choices result in limitations on their own subsequent autonomous capacity.

Autonomy as a Public Right

Liberal states do, however, guarantee autonomy of a more restricted kind, as specified by a public conception of justice and secured by society's basic public institutions. On this conception, autonomy is a *threshold* concept, possessed when people's rights are effectively protected and when public institutions effectively regulate the contracts and legally enforceable obligations people voluntarily undertake. When we speak of "violations of autonomy," we must be referring to the threshold conception and not to the conception of autonomy as a capacity.

Least Restrictive and Costly Means

One might argue that citizens have a general right that public institutions should use the least restrictive and least costly means to achieve legitimate state goals and to protect other rights. Public policies usually involve restrictions on liberties, and where public institutions adopt unnecessarily restrictive means, they restrict liberties unnecessarily. But our institutions have no right to restrict our liberties unnecessarily, and citizens have a right against such restrictions. Similarly, when public institutions pursue legitimate interests in a way that involves excessive costs, this can also be a violation of rights, especially if those costs are private costs and are focused on a particular group.

This very general right is important for the discussion of food labeling, since positive and negative labeling regimes would have very different costs and different degrees of restriction associated with them. A negative labeling regime, which simply helps producers to identify their product as "organic" or as "not containing GE ingredients," would provide opportunities but no restrictions, since no one would be obliged to place such a label on their product. On the other hand, a positive labeling regime would involve coercion, since it would embody a requirement that conventional producers label their product, even though they would (presumably) prefer not to do so. If one could argue that a negative regime would be sufficient to protect consumer rights and to promote legitimate public interests, then one could argue that a positive labeling regime is unnecessarily restrictive and that it violates citizens' "least restrictive means" right. If such a case could be made, it might also follow that a positive regime involved excessive costs, since more coercive policies are typically more costly than their less coercive alternatives.

THREE POTENTIAL PROPOSALS FOR MINIMAL POSITIVE LABELING

In the sections that follow I consider three different proposals, each of which corresponds to one of the boxes in table 10.2. I hope that each of these proposals is sufficiently precise and detailed to be evaluated in meliorist terms, as a proposed improvement on the status quo. The arguments relevant to their evaluation, however, have implications for other proposals one might describe, corresponding to the unexamined questions diagramed in table 10.1. While I do not claim to have

provided answers for all of the questions relevant to food labeling, I do explain some of the implications of my discussion for the unexamined questions.

I first consider whether any of the three institutions mentioned above (the FDA, state governments, or the federal government) has an obligation to institute a minimal positive labeling regime:

1. Should the FDA implement a positive labeling regime, requiring that foods that contain or might contain GE ingredients bear a label that specifies "This product may contain genetically engineered ingredients"?
2. Should state legislatures implement a positive labeling regime, requiring that foods that contain or might contain GE ingredients bear a label that specifies "This product may contain genetically engineered ingredients"?
3. Should the federal government implement a positive labeling regime, requiring that foods that contain or might contain GE ingredients bear a label that specifies "This product may contain genetically engineered ingredients"?

Positive labeling regimes may significantly vary in their strength. For example, the labeling regime envisioned by the authors of Oregon's Measure 27 would have required very specific information specifying exactly what genes and procedures had been used. The regime that would have resulted from passage of Measure 27 would have been significantly stronger than the labeling regime that exists in the European Union, since it would have required labels for products from animals that had *consumed* GE feed as well as for foods that have GE ingredients. A label that simply specifies that a product "may contain" GE ingredients would be much less restrictive and would solve some problems that would arise under a stricter positive labeling regime; for example, producers often do not know all specific features of the ingredients they use in making their products. It is not certain that such producers would have been able to market their products in Oregon at all, had Measure 27 passed.

The "may contain" regime envisioned in the three questions above may be the most minimal form that a positive labeling regime might take. It is useful to consider this minimal regime, since the conclusions we draw from this examination have further reaching implications. For example, if (as I urge) there are good reasons to think that the FDA should not impose even such a minimal regime, this would almost certainly imply that the FDA should not impose a stricter regime such as the one specified by Oregon's Measure 27.

After considering these three questions, all of which involve a *positive* labeling regime, I then briefly consider the prospects for a negative labeling regime and the questions and reasons one might use to evaluate and justify such a regime.

SHOULD THE FDA IMPLEMENT A POSITIVE LABELING REGIME?

Among those who favor mandatory labeling in the United States, most regard the FDA as the institution best suited to enforce or regulate such a regime. Streiffer and Rubel (2004), for example, argue among other things that the FDA should understand its central mission to be the promotion of citizen autonomy,

that autonomy would be promoted by a positive labeling regime, and that consequently, the FDA should oversee the administration of such a regime. Existing FDA activities, they urge, are best explained and rationalized by this assumption, since all of the appropriate regulations the FDA now enforces serve to protect and increase citizen autonomy (Streiffer and Rubel 2004).

Existing FDA regulations generally fall in two categories: Some protect consumers from potentially harmful products, while others protect consumers from false or misleading packaging and advertisement. Since protection from harm and deception both serve to promote autonomy, one might see the mission of the FDA as intimately tied to autonomy promotion. As the FDA has traditionally interpreted its mission, it is an agency charged to protect consumers from risk and fraud, by ensuring that products are safe and that labels do not contain false or misleading information. But both of these aims promote citizen autonomy: The autonomy of consumers is undermined if they are harmed by dangerous products, or if they are bamboozled by false or misleading labels. Since traditional FDA regulations all serve to promote autonomy, one might urge that the FDA should take "the promotion of citizen autonomy" as its primary mission and aim. Labels for GE foods would promote citizen autonomy, since more informed consumers will be able to act more autonomously. Therefore, one might conclude, the FDA should institute a positive labeling regime for GE foods.[8]

The preceding argument is interesting and partly persuasive. But as I argue in the following section, it should not lead us to conclude that the FDA should regard the promotion of citizen autonomy as its primary aim, or that the FDA should impose a positive labeling regime for GE foods. In fact, I argue that it is not permissible for the FDA to impose such a labeling regime. Let us suppose what may be true: that Congress, in enacting the Food, Drug, and Cosmetic Act of 1938, which brought the FDA into existence, had as its objective that the resultant regulatory institution would effectively promote consumer autonomy. Congress, we may suppose, created an agency charged to regulate products to ensure their safety and to regulate labels to ensure that the information they contain is truthful and nonmisleading. Even if this were verifiably true, it would in no way follow that the FDA should take autonomy promotion as its aim and mission. In fact, as I argue, the FDA might promote citizen autonomy *worse* if it were to take "autonomy promotion" as its mission. But first, I argue that Congress has no right to create a regulatory institution that has as its mission the promotion of citizen autonomy.

Argument 1: Limitations on the Authority of Regulatory Institutions

One might argue that the mission of the FDA is limited by the authority that Congress could rightly exercise in creating the FDA. The power of Congress to create regulatory institutions is a limited power, and the relevant limitations are passed on to any regulatory institutions Congress may create. In particular, Congress has no right to create regulatory institutions that take over functions that should properly be served by the elected representatives in Congress themselves. To do so would be for the members of Congress to abrogate their own

responsibilities by shifting them to someone else. There are good reasons why legislative positions should be subject to democratic control, while positions within regulatory institutions should be somewhat buffered from democratic forces. The reason that it would be inappropriate for a regulatory institution such as the FDA to take as its mission and charge to *promote consumer autonomy* is that this mission not only is too broad to account for the limited aims articulated in the Food, Drug, and Cosmetic Act (FDA 1938) but also is a mission that extends too deeply into realms that should be under the authority of a democratic body such as the legislature. The legislature, one might argue, has no right to create a regulatory body charged to promote consumer autonomy, because it is the job of the legislature to promote autonomy.

Evaluation of Argument 1

How much weight should this argument receive? Clearly, the authority to create regulatory institutions is a limited power, and legislators have a responsibility to ensure that many important matters of public concern are accomplished by elected representatives, not regulatory officials. While this argument seems worth serious consideration, full development of it would require a more articulate account of the limitations of legislative authority. This is not the place to develop such a theory, and in its absence, one might reasonably find the argument less than fully persuasive.

Argument 2: Perceived and Actual Consumer Risks

Clearly, one part of the FDA's mission is to ensure that products are not dangerous or excessively risky for consumers. But we might distinguish between the risks people perceive or believe themselves to face, and the actual risks they face. The real or actual risk associated with an option is a function of the objective probability that this activity will result in harm, and the magnitude of the harm in question. Real risks are larger when the probability of harm is greater or when the magnitude of the harm is greater. The perceived risk of an option is the *subjective perception* that the option may result in probable harm. Since we may be wrong about the probability of harm, and since we may have false beliefs about the magnitude of possible harms we believe ourselves to face, perceived risk may be significantly different from actual risk.

When people believe themselves to face significant risks, they often desire regulation to mitigate risks. But if people are wrong about the risks they actually face, they may desire regulation even where regulations will not significantly reduce the real risks they face. As consumers, we may often perceive the risks we face very differently from the way these risks are weighed by analysts employed by regulatory institutions. In such cases, people may intensely desire regulation for risks that are perceived as great but that are in fact quite small. For example, Paul Slovic's study of risk perception showed that many people had a relatively intense desire for regulation of risks associated with satellite crashes, and a somewhat less intense desire for regulation of the much greater risks associated with smoking and home swimming pools (Slovic, 1987 and 2004). This is interesting

in part because the probability that one will suffer harm due to a satellite crash is *very* low—much lower than the likelihood that one will suffer harm as a result of smoking or as a result of an accident in a swimming pool. Even if a majority of people have an intense desire for regulation to reduce satellite crash risks, surely it would be a mistake for our regulatory institutions to spend extensive resources on these risks. Regulatory institutions should regulate *real* risks, not perceived risks. And where the public perception of risk is inappropriate, our institutions should educate us about them instead of simply giving us what we think we want.

This argument has direct application to the food labeling issue. Slovic's (1987) research also found that people regarded DNA technology as risky and that there was an intense desire for regulation of this technology. Concerns about GE foods have surely fed, to some extent, on the perception that they are unfamiliar and may be dangerous. But like concerns about satellite crash risks, the perceived risk of GE foods almost certainly outstrip the actual risks people face. There is no reason to believe that consumers face higher risks when they consume products with GE ingredients than when they consume organic products, and it is sometimes argued that organic products are the ones associated with higher risk.[9] Following the reasoning used in the case of satellite crash risks, one might reasonably urge that regulatory institutions should regulate *real* risks, not perceived risks. Net consumer risk would increase if our regulatory institutions shifted money from regulation aimed at reducing the actual probability of harm to regulation of more minimal risks that are associated with public fear and dread. Such a shift in regulatory focus might be popular, since it would give people regulation they want. But it would result in an increase in probable harms people would actually face. For these reasons, regulatory institutions should function very differently from democratic institutions. We should not design regulatory policies around popular fears and desires, but around actual risks and dangers. Institutions such as the FDA should therefore be insulated somewhat from the control of democratic institutions: While politicians, at least if they want to be reelected, have reason to provide people with what they think they want, regulatory institutions should be able to respond to real risks and should not be subject to manipulation from consumer fears.

One might think that citizen's autonomy is well served when public institutions give people what they want, but regulatory institutions don't work this way: Even if our reason for creating regulatory institutions such as the FDA is for the purpose of promoting citizen autonomy, it would not follow that the FDA should take autonomy promotion to be its express aim or its mission. Autonomy is undermined when people face excessive risks and when we systematically misunderstand the risks we face. We will not promote citizen autonomy if our regulatory institutions cease to regulate real risks and instead regulate *perceived* risks. Paradoxically, regulatory institutions are likely to function best to protect autonomy if they do not understand autonomy promotion to be their mission or their aim.

Evaluation of Argument 2

It seems appropriate to distinguish between actual risks and perceived risks and to urge that regulatory institutions such as the FDA should regulate the former,

not the latter. But it is worthwhile to note that these regulatory institutions must not be *entirely* insulated from the democratic process, and there is good reason to be concerned about the proposal to replace conventional judgments of risk with expert judgments by professional analysts. For one thing, professional risk analyses reflect the biases and the perspective of those who perform them. For this reason, risk analysts within an industry generally rate risks lower than external analysts who are viewing industry risks from the outside. Since analysts within regulatory agencies often come from the industries that are to be regulated, there is reason for concern that regulatory agencies may systematically underestimate the risks that people face. The problem of institutional capture, in which regulatory agencies come to represent the interests of the industries they are supposed to regulate, is a general problem, and charges of institutional capture have regularly been leveled against the FDA. There are reasons to question any risk assessment and to be suspicious when others tell us that the risks we face are very different from those we believe ourselves to face. Still, it seems right to urge that regulatory agencies should avoid replacing the assessment and regulation of risk, which is certainly part of their mission, with public relations. This is what our institutions would do if they were to begin regulating perceived risk instead of actual risk.

As an argument for the claim that the FDA should not put in place a positive labeling regime for GE foods, this argument is incomplete for several important reasons. First, people's desire for labeling may be only partly based on their perception that GE foods are risky. People may instead desire food labels because they are interested to purchase food from nontraditional producers, because they oppose industrial agriculture, or for a variety of other reasons that may have nothing to do with their perception that GE foods are risky. Second, the FDA is charged to guarantee that food labeling is truthful and nonmisleading. We must consider whether this charge would justify the FDA in imposing a positive regulatory regime like the one identified above.

Argument 3: GE Foods and Misleading Labels

It has sometimes been argued that the absence of labels on GE foods is systematically misunderstood by consumers and that such foods are therefore misleadingly labeled. There is some support for this claim: Most U.S. consumers apparently believe that they have never eaten GE food products and are surprised to find that 70% of foods sold in American grocery stores contain GE ingredients. The fact that consumers are surprised to discover this shows that consumers are not well informed about GE foods and that they may be misled by the fact that these foods are not labeled.[10] But the fact that people are surprised does not by itself show that the labels are misleading.[11] To be culpable for misleading others, one must intentionally lead them astray, but there is no reason to believe that producers whose GE-ingredient-containing products are unlabeled are intentionally misleading consumers. Still, it is within the authority of the FDA to ensure that consumers are not systematically misled. This provides some reason in support of the claim that the FDA has a right, and perhaps even an obligation, to institute labels for GE-containing products.

Evaluation and Response to Argument 3

Unlike arguments 1 and 2, this argument would lead us to conclude that the FDA may indeed have an obligation to institute a labeling regime for GE foods. But meliorism requires that we consider whether the labels that would be used under such a regime would be less misleading than labels that are presently in use. It is far from clear that the labels would pass this test. The FDA has staunchly resisted political pressure to require labels for foods where those labels are not associated with risks. For this reason, people may reasonably take an FDA requirement that some ingredient be identified with a special label to be an indication that there is increased risk. This expectation would be thwarted if the FDA were to part from its existing policy by requiring a special label for GE foods. Thus, the *existence* of a label might be just as misleading as its absence, since consumers might reasonably take the requirement that GE foods be labeled as an indication that GE foods are risky.

The argument that labels for GE foods would themselves be misleading is often used by pro-biotechnology advocates whose reasons for using this argument may be suspect. Still, there is reason to restrict the jurisdiction of the FDA to a strict regulatory function so that consumers *can* use the existence of an FDA requirement as an indication of risk. Since the status quo position of the FDA is that labels are not required in the absence of risk, we need good reason to believe that the alternative would be an improvement. While readers must make this judgment for themselves, I am unpersuaded that labels for GE foods are required in order to ensure that packaging is not misleading.

Argument 4: The FDA Should Institute Labels Because They Are Required by Democratic Autonomy

When asked, a majority of U.S. citizens report that they want GE foods to be labeled. It might be urged that the FDA should institute labels because this would be a way to democratically respond to what most people want.[12]

Response to Argument 4

I argue above that regulatory agencies should be insulated from democratic forces, because they are better able to manage public risks if they are in a position to respond to the risks people *actually* face as opposed to the risks that people perceive themselves to face. This argument would imply that the FDA should not impose regulation merely because it is desired. But this argument should lead us to consider whether democratic institutions such as state and federal legislatures might have reason to take over where the authority of the FDA runs out.

SHOULD STATE LEGISLATURES IMPLEMENT A POSITIVE LABELING REGIME?

Legislative bodies have quite a different function and mission from regulatory institutions, and legislators have good reasons to be responsive to people's

preferences, even in cases when their preferences might be thought to diverge from (what others perceive to be) their interests. For this reason, it would be *permissible*, within the context of democratic institutions, for legislators to impose a labeling requirement for GE foods as a means to respond to citizens' desire for such a regime. The sense in which it is "permissible" is a weak one: There would be no institutional impropriety in the behavior of democratically elected legislative bodies that act to put in place a positive labeling requirement as a means to respond to electoral pressures.

State legislatures may not be the appropriate bodies to undertake this project, however. If different states adopt different requirements, this could be unnecessarily costly for producers, who would surely pass these costs on to consumers. When Oregon's Measure 27 came before the electorate, the FDA urged that this legislation would impede "the free flow of commerce between the states" (Crawford 2002). If this claim is true, it would follow that the federal government has the legal power to prevent states from implementing a labeling regime. This would run afoul of the principle that regulation should be accomplished using the least restrictive and least costly means available. In any case, the cost of state-by-state labeling provisions would be high, and it would be complicated for producers to comply with a wide variety of different statutes. For this reason, it would seem that if any legislative body should institute food labeling, it should be done at the federal level.

SHOULD THE FEDERAL LEGISLATURE IMPLEMENT A POSITIVE LABELING REGIME?

Federal legislators are positioned to be responsive to voter concerns, and federally mandated labeling for GE foods would not create special problems for interstate commerce. Federally mandated regulations have the additional benefit that they fall equally on producers in all states and thus avoid putting some producers in an unfair position of competitive disadvantage relative to other conventional producers. Since a labeling regime would be a regulation of interstate commerce, and since Congress has an express right to regulate interstate commerce, it seems clear that the houses of Congress have a right, if they choose to exercise it, to require labels. In consequence, it would seem that federal legislation would be the best way to implement a regime for labeling GE foods. If such a regime is to be put in place, the federal legislature is the appropriate institution to accomplish this.

Still, several considerations may call into question the claim that the state or federal governments should put a positive labeling regime in place. First, if a labeling regime would be expensive and would require institutional support, then it should not be put in place unless there are very good reasons for doing so. Once institutions are in place, a kind of social inertia often serves to keep them in place whether they are needed or not. For this reason, Congress should generally resist proposals to implement costly regulatory institutions unless there are powerful reasons why they are needed. Second, positive labeling would involve a restriction on the liberty of conventional producers who may currently market their products

without a label. Restrictions on liberty are often justifiable, but should not be put in place unless there are good reasons. It can be argued that the mere preference of the majority, independent of the reasons that underlie that preference, is at best a very light reason in favor of removing an existing liberty.

On the other hand, the reasons supporting a liberty *not* to label one's product might be considered similarly light: While federal regulations would not impose a competitive disadvantage among conventional producers whose products may contain GE ingredients, it very well might impose upon this entire class of producers a competitive disadvantage relative to organic and non-GE producers. But it is not obvious that this competitive disadvantage should be regarded as supporting a public interest of any kind. To be sure, producers required to label their product may have a *private* interest in lobbying against such labeling, but it is not clear that they would be lobbying for any interests other than their own. Labels that provide information to consumers that want that information would not violate the rights of those who would prefer to sell their product unlabeled, and would serve the interests of consumers who may want the information labels would provide. I am led to conclude that it is quite permissible, other things being equal, for federal legislators to impose a positive labeling regime, but that they should not do so unless the cost is reasonable and the benefits are important.

We should resist, however, the argument that our legislators would be violating the democratic rights of their constituents if they *didn't* put a labeling regime in place. The mere fact that a majority would like their legislators to do something is a reason but, at best, a very *light* reason for legislators to do it. If popular desire for labeling is a mere popular preference, independent of substantial reasons backing up that preference, then legislators may have reason to respond to this preference if they (the legislators) wish to be reelected. But in a democratic republic, legislators are not supposed to replace their own judgment with the judgment of their constituents. Because of this, legislators should carefully consider the *reasons* people offer for wanting GE food to be labeled and should not simply respond to voter preference. If citizens' interest in labels is strong, and as long as there are appropriate avenues for citizen action to lobby and persuade legislators to carry out the policies their constituents want, and as long as voters have the ability to vote out politicians who do not represent their values, then procedural democratic rights are secure. In the absence of compelling reasons that militate in favor of a positive labeling regime, the mere fact of public preference should not be a decisive consideration.

NEGATIVE LABELS AS A LOWER COST AND LESS RESTRICTIVE ALTERNATIVE

If the arguments of the preceding sections are successful, it would follow that the FDA is not at liberty to impose a positive labeling regime for GE foods. While state governments have the power to impose such a regime, their right to do so is in question, and it seems quite possible that any state that attempted an experiment like Oregon's Measure 27 would be challenged in court or by Congress.

While Congress clearly has the power to implement such a regime, some of the same considerations I have raised should cause legislators to think carefully before doing so. These conclusions, so far, are all negative. Above, I urged that we should adopt a meliorist approach as we consider whether a labeling policy is justified. It seems far from clear that a positive labeling requirement, even a minimal "may contain" requirement such as the ones examined above, would be an improvement on the status quo. In fact, I think there is an improved policy to be defended and that this policy would be cheaper and less restrictive than the minimal positive labeling regime discussed above.

Negative labels would be labels that identify products that do *not* contain GE ingredients. It would be an advantage for organic and alternative producers to be able to place such labels on their products, and when such labels are used, it would be within the authority of the FDA to ensure that the information they contain is true. Since the use of such labels would be voluntary on the part of producers, enforcement costs would be minimal. If there is a significant market for "non-GE" alternatives, then the interests of consumers who prefer to purchase these alternatives would be served if the FDA were to encourage such labels and to guarantee that the information they contain is accurate. Since negative labels would not create trade barriers, states could facilitate meaningful negative labeling regimes without running afoul of free interstate commerce.

It has sometimes been urged that negative labels would be insufficient, since they would not educate consumers about the extent to which their diets contain GE ingredients (Rubel and Streiffer 2005: 78–79). Since consumers systematically make unjustified assumptions about unlabeled food—the assumption that such food does not contain GE ingredients—one might urge that positive labels are necessary to protect consumer autonomy. But in order to support consumer autonomy, it is not necessary to ensure that people make choices that comport with their expressed values. Rather, respect for consumer autonomy requires that people have access to the information they need to make informed choices. Negative labels provide people with necessary information. Those who care about this information will look for it. If some consumers would make different choices but do not care enough to look, then there is reason to question whether their interest in avoiding GE products is a strong interest that needs federal protection.[13]

CONCLUSION

I argue here that it would not be permissible for the FDA to impose a positive labeling regime for foods that contain or may contain GE ingredients, and that it would be similarly inappropriate for state legislatures to impose such a regime. While it is permissible for the federal legislature to require positive labeling, there are good reasons to recommend negative labels instead, as a less costly and less restrictive alternative. I began this chapter with a brief discussion of Oregon's Measure 27, which would have implemented an exceptionally strong labeling regime for the state of Oregon. How should this discussion inform our view of that measure?

While I urged that state-by-state regulation would be inefficient, this argument should not be persuasive to people who believe that the federal government is too slow to act, or to those who believe that the FDA's actions in this matter reflect institutional capture by the biotech industry. Still, there is reason to worry that Oregon's measure 27 would have been an excessive and excessively costly measure that would have done little to protect consumers. Those interested to lobby for public action in this regard would do well, from the strategic point of view, to begin with a much more modest effort. A negative labeling regime that simply provided organic and non-GE producers with a more meaningful way to distinguish their product might be a good first step that would represent a concrete improvement over the status quo.

Notes

1. All quotations in this paragraph are from Oregon Measure 27, November 5, 2002. The text of this measure, along with arguments for and against it from interested parties, are available on the State of Oregon Secretary of State website at http://www.sos.state.or.us/elections/nov52002/guide/measures/m27 (accessed 10 April 2007).
2. The Genetically Engineered Food Right to Know Act was reintroduced in 2006 as H.R. 5269. While it has not passed, there is good reason to expect that its supporters may reintroduce it once again in 2007.
3. Philip Peters and Thomas Lambert (chapter 9) provide a helpful continuum of different dispositions that regulatory agencies could adopt with respect to the problem of food labels. For additional discussion of this issue, see Carter and Gruere (2003), Durant and Legge, (2005), FDA (2001), Gaskell et al. (2004), Hansen (2003), and Rippe (2000).
4. Streiffer and Rubel (2005) cite a variety of different studies that purport to show that people overwhelmingly desire labels for GE containing products.
5. Kalaitzandonakes, Marks, and Vickner (chapter 7) provide support for the view that most consumers would not significantly change their behavior in the presence of labels.
6. E.g., Rubel and Streiffer (2005: 82–83) represent democratic rights as a species of autonomy right.
7. The notion of rights as zones of autonomous choice is sometimes contrasted with the conception of rights as protections for fundamental interests. These conceptions may in turn be compared to Hohfeldian conceptions of rights, which may entirely bypass the dispute between choice and interest conceptions of rights.
8. I intend this to represent one aspect of the position defended by Streiffer and Rubel (2004). Since their view is sophisticated and complex, I am not confident that the objections I raise to this view are decisive against the more sophisticated view they have developed. The position described, however, is one that has significant appeal in its own right.
9. See, e.g., Pence (2001: chap. 1).
10. Streiffer and Rubel (2004) urge that the absence of labels for GE foods is misleading and that the FDA therefore has an obligation to require labels.
11. This point was made by Markie (2005).
12. A version of this argument appears in chapter 5 by Streiffer and Rubel and in Streiffer and Rubel (2004).
13. This argument should be understood to be limited: If people would care enough to look for labels if they knew more, and if they are not well educated because there have been insufficient efforts to educate people, then the fact that people do not look for negative labels will not imply that it is morally unproblematic when they purchase products they would

shun if they were better educated. In such cases, opportunities for public education should be improved. But the argument for public education concerning GE foods is not by itself an argument for food labels, since it is not at all clear that such labels are the appropriate way to educate people about GE foods.

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