



## Agriculture and Food Issues in the Bioethics Spectrum

by Paul B. Thompson

When Van Rensselaer Potter coined the term “bioethics” in 1970, he intended for it to include subjects ranging from human to environmental health, including not only the familiar medical ethics questions about the beginnings and endings of life, but also questions about humanity’s place in the biosphere. Today, we tend to think of bioethics primarily in terms of -medicine and public health. Environmental ethics has matured into a somewhat separate subdiscipline where philosophers and ecologists ponder the imperatives of species conservation or -population growth.

The emerging field of agricultural and food ethics straddles the dualism implicit in our contemporary mindset. On the one hand, agricultural and food ethics is concerned with a host of issues relating to risk and health, including nutrition and the potential for adverse health affects from pesticides or biotechnology. On the other hand, agriculture has obvious effects on the broader environment, and it is impossible to ignore questions about the moral standing of agricultural animals or the impact that food production has on wild nature.

Such topics will sound familiar to professionals working in medical as well as environmental ethics. Issues related to diet and health provide a natural link between agricultural ethics and medical humanities. Yet agricultural ethics has an additional focal point that looms over any discussion of food like the proverbial elephant in the room: farming has historically been deeply intertwined with culture and social organization. The last 250 years of Western history have been a steady transition from 80 to 90 percent of the population directly involved in farming to our present situation where that figure is less than 1½ percent.

Changes in the pattern of farming practice reverberate through our social life in profound and unexpected ways. Some of the most profound social issues of the 20th century have their roots in agrarian transition: urbanization and suburban sprawl (which may relate to nostalgia for the rural life); pressure on the institution of the nuclear family and a perceived decline in community ties; anxieties over the increasing rationalization of society and the “disenchantment of nature.” Unpacking and examining such phenomena defines entire careers in agricultural ethics. Within rural communities today, the sting of agrarian transition continues to be felt as a desperate need to prevent family farms from disappearing entirely.

There is much to be said in favor of the family farm. Traditional family farms had diverse and well-integrated work routines in which every family member made an evident contribution to the family’s well-being. Rural communities composed of family-based economic production units have loose (but essential) interdependencies that can foster a deep sense of solidarity and place. Diversified farms can foster sensitive and ecologically sustainable interactions with the broader environment. When all these aspects of family farming are working well, family farm communities satisfy important aspects of personal, social and ecological health.

But rural areas can also become a jungle of personal and social isolation, prejudice and xenophobia. Probing the linkages amongst personal, ecological and community health is a key topic for agricultural ethics. One relatively undeveloped link to medical ethics is the critical

matter of rural health care. Medical practice has undergone its own agrarian transition, and the challenges posed by bringing the benefits of modern medical technology are considerable. Still, a more immediate tie to medical humanities comes through examining some of the questionable moves that have been made on behalf of the family farm, which connect up to more pervasive health issues.

Our political efforts to save the family farm have included farm subsidy programs that may have actually hastened the advent of today's megafarms, while distorting the underlying economics of our food system beyond recognition. Subsidies for corn (and tariffs on cane sugar) have encouraged the development of cheap corn sweeteners, on the one hand, while encouraging low-cost confined animal production for meat and eggs, on the other. Our eagerness to save the family farm may have helped create the price system that made the fast food diet possible.

Studies persistently reveal that physicians are the public's most preferred source for information on diet and health. Nutrition has only recently (and somewhat imperfectly) been incorporated into the formal training of physicians. Yet studies on the risk factors associated with obesity and the dietary basis of other degenerative diseases have made dietary advice into one of the staples of ordinary patient care. Perhaps the time is ripe for mainstream bioethics to take a hard look at food issues.

Philosophical issues arise within the domain of nutritional science itself. Human nutritional science has historical roots in colleges of agriculture, with one foot in home economics and the other in animal husbandry departments. Animal nutrition studies aimed to maximize growth and weight gain with little thought to the potential for long-term health effects. While human nutritional science has long since distanced itself from that tradition, it is still fair to say that nutritional studies tend to treat the human population as a homogenous whole. Until the 1980s, daily requirements for vitamins as well as for the relative balance of fats, protein and carbohydrate were based on aggregate populations that did not reflect important differences among human beings.

By the 1970s, nutritionists began to realize that the needs of women and children were markedly different from those of adult men. Gradually, nutritional studies have become more sensitive to differences in age, gender and level of physical activity, as well as recognizing special needs associated with pregnancy or disease. Nutritional science has yet to cope successfully with the potential for differences in dietary needs based on genetic variation. But many of the variables relevant to such differences that are inherently difficult to control. Nutritional research methods require long-term studies on relatively large populations, and the potential for confounding factors is ever present.

Given this background, it is not surprising that there have been frequent reversals in dietary recommendations based on nutritional research. Recommendations against salt and even sugar consumption have vacillated between mild and severe over the last forty years. Red meat and milk products were once highly recommended, and then became substances to avoid. Recent studies apparently vindicating the principles of low-carbohydrate diets have restored some of their acceptability. Nutritionists have also squabbled over the acceptability of vegetarianism. Health effects of foods, of food additives, and even of contaminants such as pesticide residue are difficult to study and remain controversial.

A philosophical analysis of nutrition science reveals the potential for problems when physicians and public health officials try to give dietary advice. Even where nutritional science has managed to attain consensus on general patterns indicative of healthy diets for the population as a whole, any particular piece of dietary advice may be useless or even counterindicated when given on an individual basis. This is not in itself an unusual situation in patient care. It does,

however, suggest both a new domain of relevance for some familiar questions, as well as a few new ones:

- Are individuals made adequately aware of the uncertainties inherent in dietary advice, both when receiving advice from physicians or from other sources? Do they have means to evaluate such advice in light of their personal situation?
- Does the mass media promote a false picture of the current state of our scientific knowledge with respect to diet?
- How should medical professionals weigh the cultural, religious, social and psychological significance of food when giving dietary advice? Is it, for example, right to challenge dietary practices that may be important to family relations in pursuit of questionable health benefits?
- Does the impact of dietary advice on rural communities have any place in the ethics of medical practice?

This last question brings us back to the elephant sitting quietly in the corner, an elephant that agricultural ethicists have learned not to ignore.

The school lunch program, food stamps and the diet-health pyramid are all under the oversight of the U.S. Department of Agriculture. Consumer advocates have suggested that farm commodity groups have had adverse affects on American health through improper influence on these programs. Clearly health should not lose out to profit in the administration of these programs, but perhaps it is time to ask the correlative question: do healthcare professionals unethically whipsaw American farmers when they offer inadequately grounded dietary advice?

There is little question that dietary changes such as the fluctuations in red meat consumption have profound effects in rural areas. Farmers build structures and buy expensive equipment to produce specific commodities. Crops in the ground and animals on the hoof represent investment decisions that cannot be fully reversed. When arbitrary or capricious changes in food consumption patterns occur, these investments can become worthless. Small, family farms are especially vulnerable to such forms of economic caprice.

The emblematic case occurred in 1996 when vegetarian advocate Howard Lyman -appeared on Oprah Winfrey's television show describing some unsavory practices in food animal production. Winfrey's spontaneous comment, "I'll never eat a hamburger again," precipitated a dramatic slump in U.S. beef prices and prompted an unsuccessful lawsuit to recover economic losses suffered by the Texas cattle industry. The economic effects of dietary advice dispensed by physicians and public health authorities are less immediate, but no less extensive and probably considerably more -long-lived.

It must be recognized that there are legitimate personal and public health issues at stake in dietary planning, and that the likely health effects to human beings must be reckoned as the priority having the greatest moral weight. Nevertheless, it is arguable that at least two groups of factors should be given *some* moral weight in configuring dietary advice. One includes the cultural, social and psychological dimensions of food consumption, the practices that make food a carrier of group identity and a source of community solidarity. The other factors are those that affect the well-being, including the economic well-being, of rural people. The tendency of health care professionals to regard especially the latter group of factors as trivial, spurious and even improper cannot be justified on ethical grounds.

The time may be ripe for a more extended conversation between agricultural and medical ethics. Agricultural ethics is like a three-legged milking stool. One appendage rests in health, another in environment, and the third is planted firmly in the social, cultural and historical

meanings of rural life. Medically-based dietary advice may be grounded in a concern for human health, but it has the potential for both cultural and environmental reverberations. Agricultural and food issues have a natural place in the bioethics spectrum, even when bioethics is conceived narrowly in terms of human health. But a complete understanding of these issues will require insight from all three legs of the agricultural ethics stool.

Paul Thompson holds the W.K. Kellogg Chair in Agricultural, Food and Community Ethics at Michigan State University. He is the author of *The Spirit of the Soil: Agriculture and Environmental Ethics* (1995), and a contributor to the National Research Council Report *The Environmental Effects of Transgenic Plants* (2002).



## **EBM and Medical Power: Outline Sketch of a History Waiting to Be Written**

**by Howard Brody**

In the Winter 2004 issue of *Medical Humanities Report*, Elizabeth Bogdan-Lovis analyzed evidence-based medicine (EBM) from the standpoint especially of the interface between the medical “consumer” and the health care system. She looked, for instance, at patient choices to adopt more technological approaches to childbirth in the face of good medical evidence showing that these approaches are worse than the more “natural” methods. As the patient is today left out of all too many discussions of EBM, this analysis was welcome. I suggest here that in order to take full advantage of Bogdan-Lovis’s suggestion—that we must always remember the “distribution of power in social relations”—further work on the history of EBM is required. I will only be able here to sketch a vague outline of a work that I believe will ultimately be illuminating.

My own vantage point (or “habitus” as the anthropologists would have it) is that of an academic family physician. We FP’s may look to the general public like standard, card-carrying members of the medical establishment. (A recent survey showed that a substantial number of patients receiving care routinely from FP’s did not know that FP was the specialty designation of their personal physician.) Among ourselves, we know that we are a member of what one of our early leaders called a “counter-culture.” In one aspect of our existence we are physicians. In another we share something with midwives and nurses, who see medicine close-up but are not part of it, and so can be especially critical of medicine.

I propose that it makes sense to view EBM as the second-most-successful recent challenge to the hegemony of Flexnerian medicine.

“Flexnerian medicine” is, very briefly, the medical worldview that came to characterize the life of the academic medical center in the last half of the 20th century. It is “Flexnerian” in the same sense that we often criticize the Freudians for forgetting what Freud actually wrote. Its advocates always genuflected in the direction of the 1910 Flexner Report, but few of them actually read the report (which actually opposes trying to make medical students memorize large quantities of basic science facts). Flexnerian medicine contained two key assumptions about authority. The first was that the highest level of medical knowledge came from studying the smallest and most basic level of organization. Lab bench research aimed at the cellular or molecular level was “real” medical knowledge and all other forms of research, including clinical trials, were derivative and relatively less satisfactory. It followed from this that the sort of medical practitioner whose work most closely resembled that of the lab bench researcher was the best physician. Such a physician was always a narrowly focused subspecialist. Only the physician who specialized in a single organ system (or ideally a single organ) could know the basic science of his own part of the body with sufficient expertise to apply real medical wisdom at the bedside. When George Engel proposed his biopsychosocial model of medicine in 1977, he referred to Flexnerian medicine as the “biomedical model” by contrast.

An essay by Lewis Thomas, a pathologist, became the “foundation myth” of Flexnerian medicine during the later decades of the 20th century. Thomas recalled how iron lungs were sent to the junkyard in huge numbers in the years following the introduction of the polio vaccine. He described the vaccine as real medical technology, and the iron lung as “half-way technology.” Real technology came from the study of cells and viruses in the laboratory under the microscope. Before we have real technology, we are stuck with halfway measures that somewhat ameliorate the downstream consequences of the disease but do not prevent or “fix” the disease in any fundamental way. Thomas suggested that almost all of medicine in the late 20th century was half-way technology, poised in the next few decades to be replaced by real technology as his fellow lab bench scientists came up with the new basic discoveries. The picture was so appealing to generations of physicians that no one asked why the polio vaccine story was such a rarity, and where the other success stories like the polio vaccine were to be found.

Various movements arose beginning in the 1960s to challenge the authority of Flexnerian medicine. The first, implicit in the structure of MSU’s College of Human Medicine in its early days, was the inclusion of the social and behavioral sciences alongside the biological sciences as the so-called “basic” medical sciences. Shortly afterward came the push toward including ethics and humanities into the medical curriculum. The 1970s saw demands to include the new specialty of family practice, and new programs in primary care internal medicine and pediatrics, in the academic medical center as antidotes to excessive specialization.

These counter-movements made little real impact on Flexnerian medicine. A few courses were added into the periphery of the medical student’s training, along with a clear message that the content of those courses was less important than “real” medicine. A few new residency programs were begun, again with the clear (even if implicit) message that those who elected to complete those residencies were less credible physicians because of their choice. Subspecialist physicians still made the big bucks and won the most prestige, while lab bench research still got the most respect and the most funding.

Later, toward the end of the century, two movements arose that much more successfully gave Flexnerian medicine headaches. The first and apparently more successful (at least in monetary terms) was complementary-alternative medicine. This article is not about that history. The second was EBM.

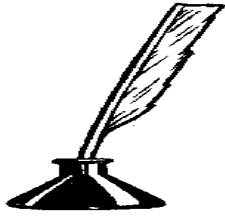
The basic truth that I have never seen mentioned in a scholarly discussion of EBM and its origins was that it grew out of the primary care medicine movement as a challenge to the authority and power of the Flexnerian establishment. EBM tried to turn “science” on its head. Formerly the fount of all real knowledge, lab bench research was now derided as nearly irrelevant. Unless one knew how the intervention worked in populations of real patients—ideally in their free-range state rather than as they appeared in the corridors of university hospitals—one knew nothing about whether one should or should not administer the intervention. The people who knew best how to design and to interpret these new research studies were not subspecialists, but academic primary care physicians and their co-conspirators, the clinical epidemiologists (who were also tired of being looked down upon and marginalized by their “real science” peers).

The EBM challenge appears to have been a considerable success. EBM enthusiasts appear to greatly outnumber EBM naysayers in the academic medical center. Even subspecialists are now belatedly trying to get onto the EBM bandwagon, and the funding for outcome trials in community settings has increased greatly. As medical schools develop new curriculum in information assessment and management, primary care faculty move into a relatively more central role in the educational process.

EBM’s apparent success has occurred despite two important limitations. First, it is too early to tell whether, and how much, EBM practices will actually improve the outcomes of medical

care in various settings (showing that EBM itself is not yet truly evidence-based). Second, there is a good deal of what I consider to be false, or at least crude, EBM roaming about which threatens to give the real article a bad name. Where good EBM says, “Base your clinical decisions on the best available evidence, whatever it might be,” crude EBM says, “Find a randomized clinical trial, put it on a pedestal, and worship it.” EBM may at present be safe from its enemies but we still have to worry about its friends.

The concluding point is simply that defenders of EBM, like their predecessors who defended Flexnerian medicine, would wish to assume that it has achieved its level of authority because it is self-evidently right. In actuality it has achieved its authority and power because of a set of social and cultural conditions that altered the power structure in a way that gave it an opening. Much has now been written about the way that Flexnerian medicine achieved its power and authority in the years following the Flexner Report. I look forward to reading some day the similar history to be written about EBM.



**InkLinks** is a regular column in which readers reflect on issues related to the previous lead article. In the current issue of MHR, Paul Thompson's lead article ("Agriculture and Food Issues in the Bioethics Spectrum") argues that bioethics has addressed only a narrow range of the large set of ethical issues in agriculture. InkLinks contributors this month echo and expand those sentiments.

## Bioethics and Agriculture

### The Philosophy Department: We're Reaching Out

**Stephen L. Esquith, Ph.D.**  
*Chair, Department of Philosophy*

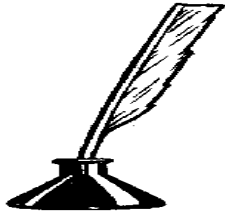
The Philosophy Department has extended the reach of its practical ethics program to include topics in development ethics, many of them involving agriculture. Our partners in this have included faculty from the College of Human Medicine, the College of Social Science and the College of Agriculture and Natural Resources. The result is an exciting set of new curricular and research activities. Let me mention just a few specific topics to highlight the important relationships between ethics, international development, and agriculture.

Perhaps the first thing to note is the central importance (and often the unwise neglect) of agriculture for development in the poorest nations of the world. It is now clear from experience that manufacturing and industrial development alone do not address the deep and persistent deprivation that exists in these developing countries. Only when efforts are made to improve agricultural production in appropriate ways by creating new capacities among small landholders and villagers do we see positive and sustained changes along other key vectors of well-being such as health and education. Agricultural international development, not surprisingly, involves many complex ethical questions as well as social and technical challenges. For example, what is the appropriate way for developing countries to utilize new genetic engineering technologies to respond to food shortages and low agricultural yields? That is, what is the appropriate institutional mechanism for addressing this vexing question in developing countries? Should national ethics review commissions be established? Should public-private partnerships between seed companies, drug companies, and government ministries be empowered to oversee this process, and will they be mindful of the effects of introducing this new technology on the patterns of land ownership? Another critical issue is the interaction between agricultural development and gender inequality in developing countries. For example, should donor organizations structure aid to build agricultural capacity and at the same time address the particular disadvantages that women, including young school-age girls, face in many developing countries?

Agricultural development, education for young girls, the survival of small landowners, the risks of genetically modified (GM) crops to future generations; these are just a few of the many



inter-connected ethical issues that developing nations face. Faculty and graduate students at MSU are now planning a week-long conference in early April 2005, co-sponsored by the International Development Ethics Association, to discuss these and other issues. It also will be the occasion to kickoff a new interdisciplinary doctoral specialization in ethics and development with Philosophy as the lead department and reaching out to faculty and graduate students across the university.



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## Bioethics and Agriculture

### A Sociologist: Look at Institutions, not just Individuals

**Lawrence Busch, Ph.D.**

*University Distinguished Professor of Sociology*

Many of the ethical issues concerning agriculture and food are not about the behavior of individuals, but of organizations and institutions. For example, labeling of food products is usually based on the argument that people have a right to know what they are consuming. But in many instances, there is little agreement as to what information labels should contain. Proponents of GM labeling, for example, argue that consumers should be able to choose whether to consume genetically modified foods. Opponents argue that if there is no known harm, then labeling is unjustified and merely raises the cost of the product. Moreover, given that food labels are of limited size, it is impossible for all information deemed relevant by some consumers to be included.

Another group of ethical issues surrounds food standards. For example, the US requires that imported fruits and vegetables be free of exotic insects that might gain a foothold in this nation. To conform to that standard, producers in exporting countries might be encouraged to spray rapidly degrading insecticides. By the time the product reaches the US, it would have little or no pesticide residue and no insect infestations. However, at the same time, it might well mean that farm workers have been exposed to harmful fumes from those same pesticides.

Subsidies to United States and European Union farmers for production of various commodities provides yet another group of ethical issues. Such subsidies are usually justified as supporting farm incomes and farm communities. Subsidies have lately become a point of friction in international trade debates, since they also depress the prices of agricultural commodities received by poor farmers in developing nations. Those farmers, who receive no subsidies, also lack the capital and other resources available to their US counterparts.



## News & Announcements

### JUDY ANDRE

- Judy Andre presented versions of the same talk titled "Virtue and the Global Village: Honesty and Public Health" at the University of Caen, France (March 16, 2004), and to the Joint Centre for Bioethics, University of Toronto (April 14, 2004).

### LIBBY BOGDAN-LOVIS

- Congratulations to Libby Bogdan-Lovis. Libby was awarded the College of Human Medicine Distinguished Academic Staff Award.

### LEN FLECK

- Len Fleck and Kathleen Delp did a workshop for the Medical Ethics Resource Network (MERN) of Michigan annual meeting in Novi, MI, under the title "Ethics, Genetics, and Social Workers: Three Cases" (May 21, 2004).
- Len Fleck did a faculty seminar for the Life Sciences and Values Program at the University of Michigan in May under the title "Pricing Human Life: Must Health Care Rationing be About Tragic Choices?" (May, 2004).
- Len Fleck published the essay "Children and Organ Donation: Some Cautionary Remarks," in Cambridge Quarterly of Healthcare Ethics 13 (Spring, 2004), 161-67.

### CLAYTON THOMASON

- Congratulations to Clayton Thomason. Clayton was the recipient of the College of Human Medicine Teacher-Scholar Award (April, 2004).

### TOM TOMLINSON

- Tom Tomlinson spoke on "Giving and Getting: The Ethics of Reciprocity in Organ Allocation" as part of the Michigan Conference on Organ Donation. Dearborn (April 22, 2004).
- Tom Tomlinson served as a paper commentator, "Health Care Resource Allocation in a Rawlsian Framework" (by B. Sachs), at the Central Division Meeting of the American Philosophical Association, Chicago, IL (April 24, 2004).