Medical Ethics

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Quote to note

"What the cloning debate allows us to do is to say, look, even some things that could help people raise grave ethical concerns."

— Anonymous Republican strategist

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The nature of morality

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One of the important facts of evolution is that each species can possess unique characteristics. Snakes shed their skin, spiders build webs, bears hibernate. Humans evaluate their actions and themselves as good or bad and, as a consequence, experience a distinctive emotion whenever they behave in ways that are inconsistent with their understanding of the way a good person behaves. These two properties define the human moral sense.

Philosophers, psychologists and biologists have grappled with two questions related to human morality. Why do humans, but no other animal, judge events as good or bad? Second, what factors determine the particular characteristics that will be judged good or bad within a particular culture? This brief essay addresses these two profound issues.

The emergence of a moral sense

The first signs of a moral competence can be observed in every home with young children. A 2-year-old looks warily toward a parent after spilling juice on the floor. The child's face and posture announce that she knows she has committed an act that violates what she knows to be proper.

Although the infant younger than 1 year perceives the changes in face and voice that communicate parental displeasure with an action, the infant is not mature enough to infer that breaking objects, dirtying clothes and crying at the dinner table, although followed by disapproval, belong to a category of bad acts. In order to infer this evaluation, the child must discover the connections among three different events — her actions, the outcomes of those actions and the parents' subsequent reactions. The ability to make inferences based on a temporal sequence of events is fragile in the first year; the infant is not mature enough to discover the concept "punishable behavior."

However, this competence does not explain why 2-year-olds impose a good/bad label on punished actions. Answering that question requires a bit of speculation. Evocation of a state of uncertainty to an unexpected event that cannot be understood is a biologically prepared reaction that invites a name when children become aware of their feelings at the end of the 2nd year. When the uncertainty pierces awareness, the child is motivated to name it. The symbolic label applied is close in sense meaning to the adult understanding of the word bad.

Children also create representations of the normal appearances of objects and notice those that are deviant. A child who sees a broken toy on the floor assumes that some action by another person must have caused the flaw. Because breaking toys is a bad act, the broken toy is also bad.

The ability to empathize with another in distress, which also emerges in the second year, has obvious relevance for morality. Two-year-olds can infer some of the thoughts and feelings of another and show signs of tension if they see that another individual is hurt. They may even offer penance if they were the cause

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Morality (Continued from Page 1)

of the other's distress. As a result, an intention to hurt another produces an anticipation of the unpleasant feelings the other might experience and therefore suppression of the intended asocial act.

When the awareness of self emerges by age 2, children apply the labels good and bad to themselves as they have done for objects and to their behaviors. If self is regarded as a bad object, the child is vulnerable to the same unpleasant feeling states that are linked to actions that were classified as bad. Hence, children try to avoid accruing evidence suggesting that the adjective bad is appropriate for them. The child understands that if he is a bad object, he will evoke unpleasant feelings in others, in the same way that bad actions produce unpleasant feelings in the self and will infer that others will avoid him.

A desire to avoid or to deny the labeling of self as bad increases with age and, in time, will take precedence over fear of punishment as the primary determinant of proper behavior. A few years later, when the child is 6 or 7, a new cognitive ability will permit the emotion of guilt. The older child can rerun a behavioral sequence mentally and decide whether the damage he caused could have been prevented. If the child concludes he could have avoided breaking a vase or hurting another, he is likely to experience guilt.

The contents of morality

Although all humans possess a moral sense, they differ, with one exception, in the acts, thoughts and feelings they judge as good or bad. The exception is the moral standard on hurting another without justification. This restraint on unprovoked aggression is due to the emergence of the feeling of empathy for another in the 2nd year.

It is more difficult to defend the natural inevitability of any other moral standard, including standards on individual freedom from the demands of others, justice, loyalty, honesty or self-interest. Many monks and nuns voluntarily gave up their personal freedom in order to serve God. Contemporary American lawyers who have just joined a large firm do not regard loyalty to the institution as a moral imperative because their culture has persuaded them that concern with one's self-enhancement is the primary standard one should obey.

An important change in Western society over the last few centuries has been an erosion of the ethical constraints on behavior that are linked with membership in particular social categories, especially gender, place of residence, type of work, class and religion.

A person who is identified with one or more of these categories accepts the constraints linked to membership in return for the feeling of virtue and self-enhancement that membership provides.

For example, forms of work — soldier, priest, banker, feudal landlord or scribe — were regarded as lifelong roles that brought pride and responsibilities in Renaissance Europe. Most contemporary Americans and Europeans do not regard their vocation as a source of distinctive pride or special responsibility. Teachers, plumbers, clerks and machinists do not enjoy the same self-enhancement as 17th century Boston silversmiths or ministers. However, humans require feelings of enhancement and virtue. I suggest that attainment of personal status, wealth and power, as well as a satisfying love relationship, serve that function in modern society. But these goals do not require one to worry about the feelings or needs of large numbers of fellow citizens.

A second change, perhaps more significant, is a result of America's need to make our society more egalitarian and to persuade minority citizens, especially those who are poor and of color, that the playing field is sufficiently even that they have a fair chance of worldly success. Persuading citizens of this fact required Americans to remove the symbols of virtue that had been attached to family pedigree, ethnicity, religion, marital status and even sexual preference.

As a result, behaviors and beliefs that, in the past, were regarded as having some sacredness have lost this quality for large numbers of Americans, but especially for those under 30 years of age. Self-enhancement and loyalty to one's immediate family are the primary standards that retain some power. The virtue that comes from a desire to nurture members of one's society — even though they are strangers — which had a moral imperative earlier, has been weakened considerably.

A question for the future

Discoveries in molecular biology and neuroscience suggest that during the next half century scientists will discover a drug that eliminates the feeling components of guilt and remorse while leaving intact the semantic knowledge that certain behaviors are ethically improper. An individual who took this drug regularly would continue to know that deceiving a friend, lying to a client and stealing from an employer were morally wrong, but would be protected from the uncomfortable feeling of remorse that normally accompanies violation of a personal standard. Hence, it is reasonable to wonder whether our society will be changed in a major way if a majority of our citizens were protected from guilt. This question addresses a long-standing debate on the basis for ethical actions and the criteria individuals apply when they are faced with a moral choice.

Most Western philosophers, but especially Kant, made reason the bedrock of conscience. People acted properly, Kant believed, because they knew the behavior was morally right. This argument for reason as the guardian of conscience has considerable merit. All individuals wish to regard the self as virtuous and try to avoid the uncertainty that follows detection of the cognitive inconsistency created when one behaves in ways that are not in accord with one's view of a good person. Dostoyevsky was imprisoned for five years in an isolated Siberian outpost with peasant convicts who rejected him because of his middle-class origins and moral premises. Although it would have been expedient for Dostoyevsky to have adopted, temporarily, the values of his debauched fellow prisoners, he continued to honor the standards he brought to this harsh setting. Kant would have understood his inability to act in ways he thought were immoral.

On the other hand, some philosophers — Peirce and Dewey are two examples — have argued that anticipation of feelings of anxiety, shame or guilt motivate continued loyalty to one's moral standards.[1,2] A person who was certain that he was protected from these emotions might find it easier to ignore the moral imperatives acquired during childhood.

The tension between these two positions is especially clear in modern industrialized societies where the balance between the feeling of virtue that follows enhancing another and the pleasure that follows the enhancing of self has shifted

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Ask the ethicist:

Should a medical practice accept a gift with strings attached?

Question: A large pharmaceutical company offered a group of hematologists-oncologists an expensive software package to improve the efficiency of their practice and the quality of patient care. It stores chemotherapy protocols, calculates doses for patients, generates flow sheets, provides a network to give doctors access to data on patients, and facilitates efficient scheduling. The physicians are part of a large multispecialty group practice. In ordinary times the group practice might have purchased this software. However, reimbursements have fallen; the group has been losing money and all discretionary purchases have been deferred.

In return for the software, the pharmaceutical company wants access to the software to monitor physician practice and prescribing patterns for marketing purposes. They assure the doctors that individual patient confidentiality will be preserved and they will not have access to data that identifies specific patients. The doctors are conflicted. They want the software because it will improve patient care but they are reluctant to provide access to information they know will be used to influence their behavior and the behavior of their colleagues. How would you advise the physicians?

Response 1: Take the gift. The two conflicting interests in this case involve benefits to patients and to the pharmaceutical company. The primary duty of physicians in the practice is to provide high quality of care for their patients, which could be improved by using the software. A second duty is maintaining professional integrity by not serving as agents to increase the pharmaceutical company's profits.

This situation creates an ethical dilemma because of two competing duties: alleviating patient suffering and maintaining professional integrity.

To better understand how to resolve conflicting duties it is useful to consider a hypothetical situation. A pharmaceutical company offers to provide chemotherapy for indigent patients who cannot afford it. In exchange, the hematologists-oncologists are required to complete a survey about their practice and prescribing patterns. The chemotherapy might prolong patients' lives and alleviate their symptoms. Because the survey data is less specific than that of actual practice patterns, only limited information could be gleaned from it. This situation creates less conflict and thus it would be more permissible for the physicians to accept the company's offer.

Administering chemotherapy involves many complex processes in which errors could occur. A software package that avoids errors and improves quality in these processes could substantially improve the quality of patient care. Giving the company access to actual practice and prescribing patterns for marketing purposes is problematic because it sets a bad precedent. It is conceivable in the future that other vital tools could be provided by companies in exchange for more control over physician practices thus leading to further loss of professional integrity.

Like many ethical dilemmas, this case presents no clear right or wrong answer. I believe it is permissible to accept the company's offer for two reasons. First, the information obtained by the company is not patient-specific and could not be used to manipulate any specific doctor-patient encounter. Second, giving the company access to practice patterns is not necessarily antithetical to physician's duties and obligations.

In a world of limited resources and competing ethical principles, we must negotiate cases of conflicting ethical values. The physician group should be sensitive to a slippery slope effect, and continue to critically evaluate its relationships with companies to maintain its integrity.

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Response 2: Turn it down. The relationship between physicians and pharmaceutical companies is complicated. It is morally solid when both work together to develop, study and safely distribute products that improve the health and welfare of patients and society. The relationship can, under other circumstances, be ethically strained because physicians and drug companies are not always bound by the same principles. Physicians are obligated to protect the welfare of their patients and, secondarily, shepherd and protect society's limited healthcare resources. Pharmaceutical companies have a fiduciary obligation to maximize profits for stockholders. This case, perhaps more subtly than other possible examples, challenges us to identify when those differing obligations result in unethical behavior.

It has been estimated that pharmaceutical companies spend $8,000 to $13,000 a year on each physician to purchase their good will and to influence their prescribing behavior.[1] Some practices, such as giving physicians free airline tickets based, at least in part, on the number of prescriptions they wrote, were clearly questionable.[2] Medical organizations such as the American Medical Association (AMA), concerned that gifts such as lavish meals, expense money, entertainment and travel create a conflict of interest, have developed guidelines that define appropriate interactions between physicians and the healthcare industry. For example, the AMA Council on Ethical and Judicial Affairs Guideline states that "Any gifts to physicians should primarily entail a benefit to patients and should not be of substantial value."[3]

The federal government has also been concerned about remuneration to physicians from the pharmaceutical industry in return for the referral of business that may be partially or wholly paid for by Medicare or Medicaid. The federal anti-kickback statute (42 U.S.C. sec. 1320a-7b(b)) makes such behavior illegal.[4] In this case, had the pharmaceutical company provided the software free of charge and asked for nothing in return, their gift might have been construed as *quid pro quo* for using their products and a violation of the anti-kickback statute.

The group of physicians is being offered software that should improve patient care; it is not an inappropriate personal gift in the same class as a free resort vacation. The value of the software

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The legal column

Financial interests and research protections: Can they coexist?

By Rebecca Dresser, JD
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By now, nearly every clinician and researcher knows about the Jesse Gelsinger case. Gelsinger died in 1999 after volunteering to participate in a University of Pennsylvania study assessing the safety of a genetically altered adenovirus. In the aftermath of Gelsinger's death, government officials and a university review committee found several problems with the study. One major concern was the financial arrangements underlying the research.

James Wilson, MD, was the director of the university institute that conducted the Gelsinger study and was also the founder of Genovo, a biotechnology company that had attracted investments from two larger biotechnology companies. Some of the funds invested in Genovo were used to support research at Wilson's university institute. In turn, Genovo and the other biotechnology companies held commercial rights to discoveries related to research at the institute. If Genovo and the other companies did well, more money would be available to fund institute research. In addition, both Wilson and the University of Pennsylvania owned stock in Genovo. If the study results proved promising, the stock's value could go up, thus benefiting the institute director and the university.[1,2]

These financial arrangements were not unique. The private sector now supplies a significant portion of U.S. funding for biomedical research. Laws granting intellectual property rights for biomedical inventions have encouraged more commercial activities among academic scientists and institutions. Many academic and community physicians recruit patients and conduct studies for commercial sponsors. The general view is that industry funding and intellectual property rights are good for society because they increase the chance that research findings will be translated into actual clinical improvements. At the same time, these financial arrangements create incentives that could lead some investigators to compromise their responsibilities to human research participants.

During the 1990s, the U.S. Public Health Service and the Food and Drug Administration issued regulations requiring researchers, institutions and companies sponsoring research to disclose and manage financial conflicts of interest. But the Gelsinger case, together with other indications that oversight was inadequate, prompted an examination of whether additional measures were needed.

As part of this examination, the U.S. Department of Health and Human Services (HHS) sponsored a 2000 conference on financial conflicts of interest in research and their potential effect on protection of human study participants. After the conference, the HHS Office of Human Research Protections issued a "Draft Interim Guidance" entitled, "Financial Relationships in Clinical Research: Issues for Institutions, Clinical Investigators, and IRBs To Consider When Dealing With Issues of Financial Interests and Human Subject Protection."[3]

The guidance document urged clinical investigators, research institutions, and Institutional Review Boards (IRBs) to consider how financial incentives — such as payments to investigators who serve as consultants or speakers, bonuses for recruiting research participants, and fees to clinicians who refer their patients to study investigators — could "color the consent discussion in a manner that encourages participation by subtly minimizing the presentation of risks or overstating the benefits" or could "affect one's judgment, or willingness to report adverse reactions possibly related to the study article, or the analysis or interpretation of data." The document said that IRBs should ensure that prospective research participants are notified of a study's funding source and the payment arrangements for the investigator "whenever that information is considered to be material to the potential subjects' decision-making process."

The guidance document also remarked on the lack of a single prevailing approach to financial conflicts in human research. This observation was confirmed by speakers at the HHS conference and writers responding to the draft guidance. According to some commentators, clinical researchers should be prohibited from holding financial interests that could be affected by the results of a study they oversee or conduct. A related view is that universities and other nonprofit institutions should be prohibited from holding equity interests in companies that could profit from research conducted at the institution. Others say such prohibitions would be premature and potentially harmful. They argue that research institutions, sponsors and professional organizations need more time to understand and develop effective strategies to manage financial conflicts of interest. This group is worried that prohibitions on certain financial arrangements could impede development of new products that could benefit society.

Complex issues are raised by the heightened commercial presence in clinical research. I offer two general points that should be taken into account in efforts to create and implement policies in this area. First, investigators are human beings whose clinical research judgments may intentionally or inadvertently be shaped by the desire to benefit financially from their activities. Whether researchers hold stock in a company that will be affected by study results or are eligible for recruitment bonuses if they rapidly enroll participants, the potential for inadequate participant protection must be acknowledged. Moreover, even if no actual problems arise, such arrangements may create the appearance of a conflict of interest. If the general public perceives clinical investigators as primarily motivated by monetary gain, people could become less willing to enroll in research. Scientists and clinicians ask people to accept the risks and burdens associated with study participation so that patients in the future may benefit. But such appeals to altruism may seem hypocritical coming from a research community that

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Ethics and the humanities:

Travels with the Wolf: A Story of Chronic Illness

By Melissa Anne Goldstein
Ohio State University Press, Columbus, 2000

Review by Jack Coulehan, MD, MPH
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In *Travels with the Wolf,* a young woman develops a persistent and unexplained illness during her first year at college. Her doctors consider various diagnoses, including atypical appendicitis, for which surgery is performed, but the patient continues to suffer from aching, fatigue and low-grade fever. Eventually she acquires the diagnosis of lupus, the wolf, but simply naming the beast fails to tame it. For the next ten years, Melissa Anne Goldstein experiences exacerbations and remissions, including lupus myelopathy, which leaves her too weak to walk. In the world of chronic illness, Melissa encounters numerous doctors who hold the reins of authority, yet live in a different world. Some fail to listen, others betray and abandon her. Only a few are willing to trust Melissa and walk with her.

Goldstein's well-written account of these events belongs to the relatively new literary genre called pathography, biography of illness. However, *Travels with the Wolf* is also an account of Melissa's quest for self-awareness. She converts her personal experience into the more general investigation of narrative in healing, both through creative writing — Melissa's illness experience is illustrated by her fine poems — and her professional work in the field of literature and medicine.

Toward the end of the book, the author asks, "Why, I wondered, do physicians harbor such strong feelings about lupus?" I have to admit that long before page 247, I struggled with those strong feelings. At a few points, I wanted to take Melissa by the shoulders and yell, "Come on, stop whining! Surely, it couldn't have been that bad!" I'm ashamed to admit this, but such feelings show how I am vulnerable to the same disheartening conflict that Melissa describes. Physicians often have difficulty empathizing with patients who threaten the comfortable belief that "objective" categories and numbers accurately reflect patient experience. While this empathy-gap is especially prominent in lupus and other autoimmune disorders, it may occur in all forms of chronic or recurrent illness. The culture of medicine tells us that we must trust the dictates of textbooks and machines. When patient experience comes into conflict with these dictates, we tend to cock our eyebrows in skepticism. Should we believe the patient whose reports, after all, are only "subjective," or put our faith in the more "objective" data, which, incidentally, is under our control? We often solve this quandary by attributing the patient's discomfort to mysterious psychological factors, rather than clear-cut disease.

Melissa finds herself plagued by distrust, defensiveness and betrayal. In 1988 when she questioned Dr. Smith's conclusion that her disability was caused by "excessive anxiety, not disease," the doctor "stood up, pulled the door open, then spat out, 'Our time is up.'" Two years later, Dr. Kostos, her second rheumatologist, responded to Melissa's persistent weakness after she completed a course of pulse steroids with a curt command, "Out of bed. On your feet." He attributed Melissa's symptoms to a stress reaction, but offered no help. Later still, Dr. Fields, a neurologist with whom she had had a good relationship for several years, diagnosed Melissa's fits as "pseudoseizures," yet never informed her of that diagnosis. Moreover, when questioned by other specialists, Dr. Fields insisted, "she's fooled us before" and refused to evaluate the seizures. When her rehab physicians sought a further work-up, Dr. Fields responded by discharging Melissa from her service, again without explanation or acknowledgement.

Yet the news is not all bad. Other physicians emerge from these pages as sympathetic characters. How do these doctors differ from the betrayers? First, they are respectful of Melissa and willing to listen to her. Second, they enlist the patient as a partner in working toward a satisfactory result. Finally, they seem to be more concerned with doing whatever it takes to get Melissa back on her feet, than they are with defending medical theory or authority. In other words, these doctors are willing to enter the world of chronic illness as sympathetic helpers, rather than authoritarian policemen.

Travels with the Wolf also contains an interesting aside on the popular cultural belief in the mind's power to heal the body. This belief, which in its extreme form might be called "Bernie Siegelism," holds that "If you heal your life by improving your attitude, resolving conflicts, and letting go of anger and bitterness, then you can heal your body." The problem with the gospel of positive attitude lies in the implication that chronic illness is the sick person's fault. One could even attribute the etiology of a poorly understood disease like lupus to "bad thinking" that generates self-destruction. In any case, if you adopt the positive attitude described in Siegel's *Love, Medicine and Miracles*, you ought to get better. It is easy to see how a confirmed Siegelist might actually blame Melissa for continuing to be sick. She just isn't positive, or holistic, or spiritual enough to get well! Unfortunately, at the core of much of our popular New Age healing lies this unspoken fillip of guilt.

Melissa Anne Goldstein is a fine writer. Readers who suffer from chronic illness themselves will likely cheer the very features of her story that made me, as a physician, uncomfortable. Yet it is precisely to experience this discomfort — and to reflect thoughtfully upon it — that I recommend *Travels with the Wolf* to physicians and other health professionals. □

Dialogue:

Reason and repugnance

David Magnus is correct and sensitive in concluding that while "it is a mistake to think that a sense of moral repugnance or anxiety is sufficient to end debate…it is not irrelevant to the debate either." ("Genetically modified organisms," *Medical Ethics Newsletter*, Spring 2001). We are, after all, creatures of feeling and reason. The problem is to know how to use reason to evaluate emotion and no less to know how to pay attention to our emotions when they challenge our reasoning. John Rawls has argued convincingly for what he has called "reflective equilibrium," whereby we go back and forth between our reasoning and our intuitions, playing each off against the other to achieve an equilibrium — but one is always subject to further adjustment. Leon R. Kass does invoke repugnance — against human cloning, for instance — but immediately follows up with reasons against cloning; his critics usually ignore that.[1]

The common mistake in rejecting our emotional reactions in favor of reason is to misunderstand our emotions. Psychology has long showed that most of our emotional responses — fear, anxiety and repugnance among them — embody cognitive judgments; and that our cognitive judgments no less embody emotional components. It makes no sense, then, to draw a sharp distinction between reason and emotion. They form a continuum rather than discrete categories. The challenge is to let each of them tutor our thinking and decisions in an appropriate way.

The failure of much risk-benefit analysis is not simply that it tries to set aside value judgments (as Magnus appropriately notes), but that it ignores the hidden emotional content of the analysis. Such an omission helps explain why those who use that kind of analysis more often come out on the side of technology than on the side of caution: their excitement or enthusiasm (both emotions, but unacknowledged) favors going forward. Their anxiety, by contrast, is slight or non-existent. This phenomenon can be seen again and again in many current biotechnology controversies. The prospective benefits of human cloning are touted enthusiastically — but those who worry about the long-term consequences are dismissed as irrational and anxious (Gregory Pence's tactic).[2]

Taking account of emotion becomes all the more important at those junctures of history when change, scientific or social, is in the air and where there is little rational precedent to work with. The early opponents of slavery, in the 16th and early 17th centuries, felt great repugnance toward it. They were disgusted by what they saw and they felt it was wrong. Yet they had no "rational" support for that feeling at a time when science held blacks to be inferior, the church approved of slavery, and many of the economic institutions of the day made it seem a necessary institution. Nonetheless, they trusted their repugnance, gradually finding a rational basis for their opposition.

Those prescient Jews in the early years of Naziism who fled Germany could not rationally prove that the early instances of anti-Semitism would lead to the holocaust — and they had many practical reasons to stay — but they had a sense that disaster was a possibility. In his splendid book *Lest Innocent Blood Be Shed*, the late philosopher Philip Hallie wrote about a small French Protestant community in France that, at direct risk to their own lives, hid Jews in their homes. Most remarkably, Hallie found, was that they could offer no "rational" reason for their action, and for their courage. They simply knew — "in their hearts" as the old saying had it — that it was the right thing to do.[3]

After many years of thinking about it, I have concluded that my initial untutored repugnance (at the age of 15) at the development of nuclear weapons and my corresponding judgment that they should never have been deployed was right. But I was beaten down for a long time by the risk-benefit argument that it shortened World War II, saved hundreds of thousands of American soldiers from death and that, in any event, "if we didn't do it, the Germans or Japanese would have." Better, now I think, that those lives would have been lost than to burden future human life with such weapons of destruction.

I mention these instances because they are almost always overlooked when it is argued that our emotions tell us little of value, or when examples of repugnance dissipated or overcome are advanced to show their flawed qualities. Of course that happens from time to time, and we look back wondering how we could have felt such resistance to something that now seems utterly benign. But for every example of that kind, I suspect one could find another that showed how spontaneous repugnance had been numbed and then excised for altogether bad reasons. I think here of the atrocities committed in war by soldiers who could never have imagined themselves doing such horrible things in peacetime. Or those who knew slavery was wrong but allowed themselves to be persuaded by the reasons of the era that they were wrong. Those contemporary Germans, fearful of genetic developments and suspicious of smooth assurances that it will not go sour, show more wisdom than they are given credit for. Maybe it is better to be kicked and dragged into the "new genetics" (as it is called) than to be persuaded by confident "reason" to forget how it all went wrong earlier.

Magnus made a shrewd choice in picking the debate over genetically modified food as his example of the clash between reason and emotion. It is an almost perfect case study, full of cost-benefit analysis of the rationalist kind and emotional outbursts of the visceral kind. As it happens, I am part of a European-North American project at The Hastings Center examining why Europeans have been so hostile to genetically modified food and North Americans so receptive. The fact that — as, analogously, with the German eugenic history — Europeans have had a recent history of food problems and government cover-ups is a partial explanation: once burnt, and so on. Yet it also needs noting that Europeans have been much quicker to regulate, and ban, various forms of human genetic research than Americans.

I bring to the project a kind of idiosyncratic response. I have felt anxiety, and sometimes repugnance, at many of the genetic developments with humans — but am almost totally devoid of an emotional response to genetically modified food. When I go to the supermarket, I always pass over the "organic" vegetables

in favor of the pesticide-loaded, genetically-manipulated variety if the latter are cheaper. I do not lose sleep over the possibility of wild "super-weeds." Meanwhile, I have testified before our Congress on a bill in favor of a ban on human cloning research and I look with suspicion upon germ-line therapy (a kind of genetic therapy that would pass all changes down through the generations).

Am I simply (a) irrational, (b) uninformed, (c) inconsistent, or (d) right on? I can't answer that question but it is clear (at least to me) that I exclusively apply risk-benefit analysis to genetically-modified food and some broader standard to human genetics (including but not limited to risk-benefit analysis). There is, in short, no good equilibrium in my overall thinking about genetic interventions, human and agricultural. Is there a better way? Well, my theory about such matters, if not my consistent practice, is that four elements need to be blended in trying to think about novel technologies with no clear historical precedents.

The first is to consult my emotions, looking for what lies below the surface; if I have no emotional reaction (as with genetically modified food), then I need to ask myself why. The second element is to use my imagination, attempting to visualize the long-term implications and possibilities of new technologies, medical, social and cultural, taking care to watch out for blatant bias of a Luddite or progress-enthusiast kind.

The third is ordinary risk-benefit analysis, but making certain that risks and benefits are understood more broadly than matters of safety and physical health. The fourth element is to consider the history of technological and scientific developments, and what became of them. The Europeans have a good reason to be more wary of genetically modified food than we are and, by virtue of the Nazi misuse of genetics, to be wary of optimistic talk about using genetics to improve human traits. We Americans would be wise to draw upon their experience, perhaps profitably coming to feel some of the repugnance we might not naturally feel because of our more sheltered history.

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[1] Kass LR. Preventing a brave new world. *New Republic* 224:21 (May 21, 2001), 30–9.

[2] Pence GE. *Who's Afraid of Cloning?* Lanham, MD: Rowman & Littlefield, 1998.

[3] Hallie PP. *Lest Innocent Blood be Shed.* New York: HarperPerennial, 1994.

Response from Professor Magnus

Daniel Callahan's thoughtful commentary presents a very complex and subtle approach to the issues involved in cognitive and emotional responses to new technologies. He points out the falsity of the dichotomy between emotion and reason and highlights the fact that there are usually good reasons for our emotional responses.

Things become complicated by the fact that different groups can and do respond differently to developments in technology (and other institutions). How do we determine which responses should be respected and which rejected as mere prejudices? As Callahan notes, institutions like slavery elicited both acceptance and repugnance in different individuals. Similarly, in the past (and unfortunately possibly even today) racial integration of schools also produced a sense of moral repugnance in many individuals and groups.

From this, two things follow. First, as Callahan points out, even if we do not share a sense of repugnance, we should respect the fact that others do — though I do not personally share the emotional opposition to either cloning or genetically modified organisms, the fact that others do, is significant.

Second, (and here I may diverge from Callahan) the mere fact of moral repugnance, while significant, is not sufficient to reject a technology. In the end, there must be reasons to offer and values that are at stake and these must be articulated to explore whether a response is justified or a mere prejudice. These values may well be compelling even when they do not fit within the framework of a cost-benefit analysis. In the debate over genetically modified organisms, considerations of justice (who has control, who is exposed to risk, who benefits), of concern with human hubris, and the appropriate balance of perspective in our relationship with nature, are as important as the harms and benefits the technology can produce. □

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(which I am assuming is not inexpensive) might raise a few eyebrows, but the more serious question in this case is not the appropriateness of the gift, but its price.

The pharmaceutical company is to be commended for its candor. It frankly admits the derived data is to be used by their marketing department, presumably to influence physicians to prescribe company products.

The marketing department of the pharmaceutical company may constructively use the data abstracted from the free software to instruct physicians how to better comply with scientifically established best practices. But there is no way to be certain that will be the case. My perhaps cynical estimate is that marketing departments are judged more on their ability to boost sales than on their advocacy of economically prudent, scientific medicine.

Using patient-derived data for unspecified marketing purposes is inappropriate. I would advise the group of doctors to refuse this tempting offer.

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Outcome: The physicians chose not to accept the software package because of the strings attached. □

[1] Wazana A. Physicians and the pharmaceutical industry. Is a gift ever just a gift? *JAMA* 2000; 283:373–80.

[2] Graves J. Frequent flyer programs for drug prescribing. *N Engl J Med* 1987;317:252.

[3] AMA Ethical Opinion 8.061 Gifts to Physicians from Industry. <http://www.ama-assn.org/cmese-lec/cmeres/cme-6.htm#8.061>.

[4] Anti Kickback Information. <http://www. dhhs.gov/progorg/oig/>.

Morality *(Continued from Page 2)*

toward a more consistent favoring of the latter state. A spouse with young children caught in a marriage that has grown stale must decide whether the ethical demand to maintain family integrity should take precedence over the desire to feel happier, more excited and challenged. A young scientist eager for a promotion, a higher salary and a brief moment of fame must decide whether to visit a sick parent or continue working on a book.

The conflict 19th century adults experienced over this choice has been replaced, in Western society, with a growing consensus, almost universal among the young, that self's pleasures and potency come first. The awarding of priority to self-enhancement in deciding whether one is happy has eroded an earlier habit of also relying, occasionally, on the judgment that one is loving, charitable, loyal, honest and nurturing, and has diluted the power of Kant's argument. Although it is not obvious that a drug that blocks remorse will eliminate the mutual social obligations that make a society habitable, nonetheless, a posture of vigilance is appropriate for, unlike gorillas, humans can hold for a very long time representations of envy, anger and dislike toward those they have never met. Hence, the anticipation of guilt and shame helps to restrain rudeness, dishonesty and aggression. We will have to wait for history to resolve this question. □

[1]Peirce CS. *Collected Papers*. Cambridge, MA: Harvard University Press, 1932.

[2]Dewey J. *Human Nature and Conduct*. New York: Holt, 1922.

Legal column *(Continued from Page 4)*

appears more concerned with financial rewards than with helping future patients.

Policymakers considering conflicts of interest should also keep in mind a second general point. History demonstrates that financial interests are not the sole source of failures to protect research participants. In any research situation, investigators want to enroll participants, complete their trials, and collect interesting data. Desires for prestige, peer recognition and scientific curiosity can also distract investigators from their responsibilities to research participants. Thus, the absence of a financial conflict does not eliminate the requirement to ensure that individuals receive accurate information and protection from undue harm in research.

Ideally, the inquiry into financial conflicts will highlight the need to protect participants in every research study. Without the volunteers, after all, neither scientists nor society could achieve any of the benefits available from biomedical research. □

[1] Marshall E. Gene therapy's web of corporate connections. *Science* 2000;288:954–5.

[2] Nelson D, Weiss R. Hasty decisions in the race to a cure? Gene therapy proceeded despite safety, ethics concerns. *Washington Post* November 21, 1999:A1.

[3] <http://ohrp.osophs.dhhs.gov/nhrpac/mtg12-00/finguid.htm>.

Medical Ethics

The *Lahey Clinic Medical Ethics Newsletter* **encourages reader participation. We welcome comments for our "Dialogue" column and invite submission of ethical dilemmas for "Ask the ethicist." Send correspondence and requests for complimentary subscriptions to David Steinberg, MD.**

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