

# World Blindness and the Medical Profession: Conflicting Medical Cultures and the Ethical Dilemmas of Helping

BRADFORD H. GRAY

*Yale University*

**T**HIS IS THE STORY OF A HUMANITARIAN INITIATIVE that never happened: the altruistic impulses of highly trained medical specialists were to be enlisted to address a devastating condition affecting millions of people and the economies of the less developed countries of the world—blindness due to cataract. The idea was deceptively simple and compelling: to marshal ophthalmologists from developed countries who would contribute their time and skills to perform cataract surgery in programs organized by the world's major private voluntary "blindness" organizations. The reasons that these potential allies could not come together to treat the huge backlog of cataract blindness highlight the ethical and practical dilemmas in international medical philanthropy. It is a story of historical residues, evolving ideologies about overseas assistance programs, the far-reaching consequences of technological change in medicine, and conflicts between the cultures of medicine and public health.

To understand this story and the dilemmas that it illustrates, one must begin with some basic information about world blindness and the role of private voluntary organizations (PVOs) from developed countries in addressing it.

## Cataract and the Problem of World Blindness

Cataract is the leading cause of blindness in the world. This opacity in the lens of the eye is thought to be caused in part by years of exposure to ultraviolet light from the sun. In contrast to the other major causes of blindness (onchocerciasis or river blindness, xerophthalmia, trachoma), no means of prevention are known. However, cataract blindness can be cured surgically. Indeed, cataract removal and implantation of intraocular lenses (IOLs) comprise the most common surgical procedure paid for by the Medicare program in the United States, as it is performed more than 1.1 million times annually, according to the U.S. Health Care Financing Administration (HCFA). Cataract surgery in the United States is generally performed long before the opacity of the lens renders patients blind, usually without an overnight stay in the hospital (Lion et al. 1990).

An estimated 14 to 17 million people in less developed countries are blind due to cataract (Kupfer 1988). (The international definition of blindness due to cataract is the inability to count fingers at a distance of three meters.) In Asia and Africa the prevalence of blindness ranges from 0.5 percent to 1.5 percent of the population, with more than half caused by cataract (Foster and Johnson 1990). The number of cataract-blind people is estimated at 4 to 6 million people in India, 3 to 4 million in Africa, 2 million in China, as well as large numbers in many Latin American and Southeast Asian countries (A. Foster 1989: personal communication). The prevalence is growing. For example, although an estimated 1.25 million cataract operations were done in 1988 in India, the incidence of cataract blindness is 3.8 million annually (Minassian and Mehra 1990).

As with many other aspects of medicine, technological change has swept ophthalmology. Modern cataract surgery involves surgical microscopes, YAG lasers, and plastic IOLs that restore sight to a high level of quality. In many developing countries, however, cataract is still treated with the intracapsular lens extraction operation that is no longer the surgical treatment of choice in Western countries. While restoring vision, it leaves patients in need of thick, aphakic glasses to compensate for the absence of the eye's lens.

### *The Backlog of Untreated Cases*

The growing prevalence of cataract is a result both of the aging of populations and the scarcities of resources, facilities, and personnel. In some African countries where cataract is a serious problem, there is not even one ophthalmologist per million people (Foster 1987). (By contrast, there is approximately one ophthalmologist for every 16,000 people in the United States.) Even some countries with many ophthalmologists have much untreated cataract among the poor and rural populations because most ophthalmologists live in cities and have fee-for-service practices with patients who have the means to pay. Moreover, many ophthalmologists do not do surgery, either because they can fill their practices with other services or because they lack the necessary training. In India, for example, there are ophthalmologists whose medical education was almost exclusively theoretical and who never gained clinical experience with cataract surgery. Many support themselves by jobs like driving taxis while more than a million new cataract cases go untreated each year.

The drag of widespread blindness on a poor country's economy might seem a compelling argument for a massive investment in cataract programs. Cataract surgery could be done in many developing countries for as little as \$25 per case (Kupfer 1988). (By contrast, the Medicare program pays more than \$3,500 for the average cataract operation in the United States.) However, in some such countries, *total* health expenditures average less than \$1.00 per person, and cataract blindness is but one of many problems.

Even if governments had more resources, cataract surgery might not be a high priority. Most patients are relatively close to the end of their productive lives, and other health care activities (e.g., involving children) may be more cost effective. Thus, programs to treat cataract blindness in developing countries are often organized or funded by private voluntary organizations from the industrialized world.

### The Role of Private Voluntary Organizations

Numerous private voluntary organizations from industrialized countries bring funds and technical expertise to the problem of blindness in less

developed countries. These PVOs range from individual churches that sponsor a mission hospital in a remote country to large, sophisticated fund-raising operations that support projects in dozens of countries. Some PVOs raise money within religious denominations or from the public at large; others are conduits for governmental development or relief funds. In the aggregate, Dr. Bjorn Thylefors, program manager for Prevention of Blindness of the World Health Organization (WHO), estimates conservatively that PVOs spend more than \$30 million annually in eye care programs in developing countries (B. Thylefors 1989: personal communication).

The blindness-related PVOs engage in a mix of preventive, curative, rehabilitation, and educational activities. Some provide services directly; others emphasize technical assistance to help host countries develop their own capacity. Some work with governments; others work through churches or various nongovernmental organizations in host countries. Some PVOs are active in a number of countries. Others are more focused, such as Australia's Foresight, which concentrates on Bangladesh, and the U.S. SEVA Foundation, which works primarily in Nepal and with the Aravind Eye Hospital in Madurai, India.

Although there may be hundreds of PVOs with overseas programs on blindness, most work is carried out by a handful. A brief description of several of these conveys the scope of their activities and suggests why they seemed to be natural partners for a cataract treatment initiative. (The PVOs themselves are the source of this information, some of which has been published [International Agency for the Prevention of Blindness 1988].)

The largest is West Germany's Christoffel-Blindenmission (CBM). Its 1989 budget of more than \$30 million dollars came from some 500,000 individual donors and was used to support more than 1,000 projects in about 90 countries. In partnership with churches and missions in these countries, CBM treated more than 5 million patients (performing 138,000 cataract operations) in 1988. CBM also distributed nearly 300,000 pairs of glasses, screened 645,000 children for eye disease, and supported 663 boarding schools and training centers for the blind, deaf, and physically handicapped.

The Royal Commonwealth Society for the Blind (RCSB) in Britain (which adopted the name "Sight Savers" in service of its fund-raising efforts) had an overseas program budget of about \$10 million in 1989 and a goal of raising that to \$24 million by 1993. The RCSB works with gov-

ernments and nongovernmental organizations in 50 countries, mainly in Africa and Asia. Activities include providing technical assistance for development of national eye care programs, meeting the capital and operating costs of 50 mobile units in Africa, supporting programs (mainly in Africa) for training ophthalmic personnel (paramedics, ophthalmic clinical officers, and nurses) and for educating and rehabilitating the incurably blind, and organizing eye camps (in India and Bangladesh) where about 230,000 cataract operations are done annually.

Canada's Operation Eyesight Universal raised almost \$5 million from 32,000 contributors in 1988 and operates 50 programs in 13 countries in the Caribbean, Africa, the Middle East, and Southeast Asia. The Canadian organization finances programs of sight restoration and blindness prevention in facilities ranging from eye hospitals to mobile eye units and eye camps; it also supports school-based children's programs and training programs for health care workers. Its reports state that their "partners" treat more than one million people annually and "open more than 85,000 cataract blind eyes each year."

Helen Keller International (HKI), the largest of several U.S. PVOs, with overseas programs for blindness prevention and the incurably blind, worked in 29 countries in 1989 and had 16 overseas offices in Asia, Africa, and "the Americas." Its activities included efforts to enhance access to primary eye care in rural areas and programs to control xerophthalmia, to remove cataract, and to rehabilitate the blind and train teachers for blind children in communities. Its \$6.8 million 1988 budget came from the U.S. government, corporations, foundations, and direct mail campaigns.

The leaders of the major PVOs know each other's programs very well. They have frequent contact through WHO's blindness program (supported largely by Japanese shipbuilding and Saudi Arabian contributions) and the International Agency for the Prevention of Blindness (IAPB), which involves representatives from 72 nations and has major international meetings every few years.

## The Initiative That Did Not Happen

In 1989, the idea was developed for a massive volunteer program in which ophthalmologists from the United States and other developed countries would contribute time and skills to the major blindness-

related PVOs to eliminate the world's backlog of cataract blindness. The ophthalmologists would leave their practices for two to four weeks, go to facilities in host countries, and do as many cataract procedures as possible, using modern ophthalmological procedures including the implantation of IOLs.

The initiative grew from the planning for the International Congress of Ophthalmology that convened in Singapore in April 1990. Held every four years, the International Congress brings together ophthalmologists from throughout the world. Planned by the International Council of Ophthalmology (ICO), the congress is usually devoted to scientific issues, not to problems such as the reservoir of untreated eye disease in poor countries. However, planners for the 1990 congress saw it not only as an opportunity for scientific exchange, but also as a forum in which to appeal for volunteers to tackle the cataract backlog. Aware of the PVOs' role in bringing outside assistance to less developed countries, the leaders of the ICO invited the major blindness PVOs to a planning meeting for the 1990 congress to discuss how volunteer ophthalmologists might be incorporated into their programs.

I attended that planning meeting in Rio de Janeiro as an observer. Prior to and during this two-day meeting in August 1989, I interviewed many key participants (see acknowledgments), several of whom provided me with documentation about their organizations.

The ICO's interest in the cataract backlog came from its president, Dr. A. Edward Maumenee, then professor of ophthalmology at Johns Hopkins. Years before, Dr. Maumenee had been active in the International Agency for the Prevention of Blindness and served as its president in the 1970s. At Johns Hopkins, Dr. Maumenee had worked on developing surgical methods for cataract removal and IOL implantation, and he believed that the methods he had been using in Baltimore might overcome a problem encountered in eye care programs in less developed countries: people often do not use available services. According to accounts from eye camps and hospitals in Africa, as few as one in twenty people who might benefit from cataract surgery come for treatment when it is available (Allen Foster 1989: personal communication). In Nepal, according to Dr. Richard Litwin (1989: personal communication) of the SEVA Foundation, about half the people in an area will come for surgery that might be beneficial.

Several reasons have been identified. In some countries cataract blindness is seen as a normal part of aging—"hair white, eyes white"

was reported to me in separate interviews as a saying in India and as a widespread African folk belief—and not something that requires correction. Some religious beliefs hold that the blind in this life will have vision in the next life. In some places hospitals are feared as places of death. There may also be issues of intergenerational power: adult offspring may welcome the independence gained when a parent becomes blind. Allen Foster (1989: personal communication) cites several other reasons, based on his extensive African experience with CBM: the geographic dispersion of potential patients, who might have to travel more than 100 miles to reach surgical sites; the cost of transportation, food, and other expenses for patients and families, even if the surgery is free; and the lack of awareness of alternatives to blindness.

Dr. Maumenee believed that the resistance to cataract surgery in some places might also stem from use of the intracapsular lens extraction procedure. The operation restores vision, but the quality is poor unless aphakic glasses are used. Many patients in developing countries do not use the glasses, either because they are disorienting (making a room “swim”) or because they become lost or broken and money to replace them is not available. Such patients may not spread enthusiasm about the surgery.

After treating more than 6,000 cases with his colleague Dr. Walter Stark at Johns Hopkins, using a posterior chamber procedure and implantation of IOLs, Dr. Maumenee knew that the resulting quality of vision was high and that complication rates were acceptably low. He believed that if this surgical approach were used in less developed countries, word of mouth about the quality of outcomes would enhance people’s willingness to undergo surgery.

Dr. Maumenee’s term as president of the ICO and chief planner for the 1990 International Congress coincided with his retirement from Johns Hopkins. The idea of devoting his energies to ridding the world of cataract blindness was very appealing. In an interview on May 31, 1989, he talked of creating “cataract-free zones.” (This term was already in use, denoting a strategy adopted by HKI and other organizations working in Latin America.)

As Maumenee envisioned it, ophthalmologists from developed countries would contribute time that might ordinarily be used for vacations to bring modern surgical techniques to untreated cataract in poor countries. The PVOs would use their resources and contacts to establish facilities in which volunteer ophthalmologists would work. These facilities

might be hospitals or “eye camps” set up either in mobile facilities or in schools or churches. Such eye camps have been used in remote areas in a number of countries.

Dr. Maumenee was mindful of certain potential problems with his plan. He noted the logistical complexities in setting up a high-volume program and the potential difficulties that volunteers might have in adapting to local conditions. He thought that the barriers presented by cultural beliefs about blindness could be overcome by the high-quality outcomes of modern cataract surgery. Another idea for overcoming cultural barriers was for the volunteer ophthalmologists to cover the practices of urban ophthalmologists in host countries to allow *them* to see patients in villages or eye camps.

By May 1989, Dr. Maumenee was identifying the elements of a program. He thought of using U.S. military mobile eye hospitals, thereby helping needy people while providing personnel with experience in operating mobile or temporary operating facilities. He was on the trail of two sources (in China and Saudi Arabia) of inexpensive (\$10 to \$20) but high-quality IOLs. The agreement that would first be needed on one standardized lens was already being discussed by concerned parties.

Dr. Maumenee believed that many volunteers could be found among the 10,000 to 15,000 ophthalmologists who would attend the International Congress of Ophthalmology in Singapore. He hoped to recruit 200 to the program and that they would return home and recruit more. He was less concerned about finding volunteers than with the need to screen out those who might not be suitable: individuals who were in training and seeking clinical experience, whose practices (and skills) had declined but who still wanted to do surgery, or who were mainly interested in an exotic vacation. All of the elements seemed to be coming together, and his enthusiasm was high. He did not foresee the possibility that the PVOs would reject the whole idea.

## The Ophthalmologists Meet the PVOs

The advisory committee to the ICO met in late August 1989 in Rio de Janeiro to make final plans for the spring meeting of the International Congress. Representatives of the leading PVOs were invited to discuss the proposal.



ICO committee members came from England, France, India, Japan, Bulgaria, Chile, and the United States. The PVOs had representatives from CBM (West Germany), Foresight (Australia), the International Eye Foundation (U.S.), HKI (United States), Operation Eyesight Universal (Canada), Organization Pour la Prevention de la Cécité (France), the RCSB (United Kingdom), and the SEVA Foundation (United States), as well as the IAPB. Several PVO representatives were themselves ophthalmologists. Several members of the International Council also attended, as did a few guests, including myself and the heads of the eye care programs of several countries (e.g., Nepal).

Two goals for the meeting were on the agenda. The first was "to reach consensus on the outline (in as much detail as possible) of a Blindness Treatment Program which ophthalmologists can work [on] with Non-Governmental Organizations, selected governmental organizations, and other appropriate groups to accomplish over the next decade." The second was "to plan an appropriate program in Singapore to inform, involve, enlist, and excite world ophthalmology and its various national societies to organize the accomplishment of the goal(s) by the year 2000."

The meeting, chaired by Dr. Bruce Spivey, executive vice president of the American Academy of Ophthalmology, was cordial and diplomatic. Dr. Spivey stressed that the committee had invited the PVOs to the meeting not to try to direct their activities, but to learn what their needs were and how ophthalmologists from all over the world could help. He observed that the 1990 International Congress would be the first one to give blindness center stage, and he expressed the hope that the occasion would excite ophthalmologists and mobilize energy that the PVOs could harness. Dr. Bjorn Thylefors of WHO summarized the epidemiology of world blindness, and Dr. Maumenee expressed confidence that many ophthalmologists would volunteer if the PVOs provided places for them to work.

After these preliminaries, the PVO representatives were each invited to describe their programs and to suggest how volunteer ophthalmologists might be used. As one presentation succeeded another, it became apparent that *the leading PVOs in the field did not see a role in their programs for volunteer ophthalmologists from industrialized countries who would do modern cataract surgery for a few weeks*. The PVO representatives suggested alternatives that involved training nationals and

sharing resources, but by the end of the meeting, it was clear that a joint ICO/PVO attack on cataract blindness in less developed countries through the use of short-term surgical volunteers was not going to happen.

### Why the Proposed Program Was Rejected

The blindness PVOs all had ongoing programs with a claim on the funds they were raising, so the adoption of the ICO's proposal for a campaign against cataract blindness would have required them to abandon partners or to alter strategies to which they were committed. Several interrelated factors lay behind their unwillingness to do this. Most fundamental was a conflict of cultures.

#### *The Cultures of Medicine and of Public Health*

Classic accounts (Paul 1954) of attempts to introduce external change into a society emphasize barriers created by cultural differences between the outsiders and the society in which they seek to intervene. The ICO proposal also ran into a cultural conflict—not between indigenous cultures and Western ideas, but between the cultures of medicine and public health. Medicine is oriented toward the welfare of individual patients, whereas public health is concerned with the health of populations. Many ideas about appropriate behavior follow from this difference (see table 1). (For another formulation of the difference between public health and “curative medicine,” see Schwab 1990.) Most are illustrated by the events I am discussing here.

The proposed initiative was rooted in the medical culture. As Dr. Maumenee envisioned it, the PVOs would each take responsibility for particular countries and would work with host governments to prepare facilities and assemble teams of trained workers and local volunteers. These teams would locate patients, prepare them for surgery, assist in surgery, and provide postsurgical care. Children in rural areas could find blind people and bring them for evaluation and treatment. When the preliminary work was accomplished and the patients were ready, a volunteer ophthalmologist would fly into the area, examine patients, do cataract surgery with IOL implantation on large numbers in a short

TABLE 1  
 Contrasting Elements of Medical and Public Health Models  
 as Illustrated by the Cataract Eradication Proposal

Medical model	Public health model
Aim is to maximize the medical interests of individual patients	Aim is to maximize the health status of a population
Content of work is provision of personal health services (e.g., surgery, drugs, psychotherapy)	Work is concerned with community health—e.g., water and air pollution control, health education, creation of health services systems
Practitioner is concerned with risk-benefit calculus for individual patients	Practitioner is concerned with relative cost effectiveness of different interventions or strategies
Practitioner's primary moral obligation is to individual patients	Practitioner is obliged to think in terms of good for the most people
Practitioner has little or no concern with overall pattern of allocation of societal resources	Practitioner is obliged to think in terms of how best to allocate resources
The ideal is the provision of state-of-the-art services	Appropriate technology, which may not be state-of-the-art, is the ideal
Patient-specific facts are relevant for decision making	Population-based measures of need are of primary importance
Outcomes are measured in terms of changes in individual patients	Outcomes are measured in terms of community change

time, and return home. Other volunteer ophthalmologists would arrive in sequence until the backlog of cases had been eliminated. The program could then move to another location.

This set of arrangements was designed to maximize the efficient use of the volunteer ophthalmologists and the number of operations (with IOL implants) that they could perform. Dr. Maumenee believed that ophthalmologists could do 30 to 40 procedures per day in such a program. He cited examples: Dr. Ruit in Nepal, who did extracapsular lens extraction and IOL implants in 15 minutes; Dr. Norval Christy, who did thousands of cataract extractions (intracapsular operations without IOLs) annually during his 40 years in India and who trained assembly-line

teams in all aspects of preparing for and completing the surgery, which enabled him to extract 150 to 200 cataracts in a single long day; Dr. G. Venkataswamy, whose team at Aravind Eye Hospital in Madurai, India, had done 100,000 eye operations in its first ten years.

In short, the ICO proposed a modern, surgery-centered approach to the cataract blindness problem. The orientation of the program would be putting patients into ophthalmologists' hands and providing other personnel to perform most preparatory and follow-up services.

During the Rio meeting and in interviews, PVO representatives explained why they would not accept the proposed offer of ophthalmological talent. Their responses were largely couched in assumptions and concerns arising from the public health perspective, although they also voiced serious doubts about practical matters and expressed the view that the logistics of the Maumenee approach were more difficult than he imagined. The differences in viewpoint, it should be noted, were not between ophthalmologists and nonophthalmologists. There were ophthalmologists on both sides of the table. The difference arose between ophthalmologists who sought to apply a technological fix to a serious problem and those who, because of their experience, training, or organizational affiliations, brought a broader perspective.

### *The Use of Short-term Volunteers*

The proposed use of short-term volunteers produced objections on both medical and public health grounds. Ophthalmologists who had worked for PVO programs in Africa recalled treating patients with serious complications resulting from surgery by doctors who had flown in and out of a mission hospital located in the bush (L. Schwab 1989: personal communication). Some saw surgery without follow-up care as irresponsible.

Suspicious and worries were voiced as well about doctors' motives in flying to exotic places to do surgery and about whether doctors who saw themselves as dispensers of beneficence might be insufficiently concerned with the results of their good deeds. The vision of American doctors flying into a central African country to operate without contacting the government, without a license to practice in the country, and without providing for postsurgical care revived recent memories for some PVO representatives. Organizations that had worked for years to build relationships of trust feared this happening in their programs.

Ophthalmologists who had sacrificed income and a more conventional career to devote years to the problem of blindness in poor countries not surprisingly distrusted and even resented doctors who decided to spend a week or two dispensing beneficence. PVO representatives were aware that many ophthalmologists in the United States were making huge amounts of money in their private practices and may have resented the notion that they could gain a sort of moral equivalency on the cheap, without any real sacrifice. PVO leaders expressed doubts about the extent of genuine altruism in the profession; one took pains to tell me of a fund-raising campaign directed to ophthalmologists that had not yielded a single donation.

The use of short-term volunteers also elicited objections on cost-effectiveness grounds, an issue that ICO's medical point of view seemed not to have taken into account. Dr. Carl Kupfer, president of the IAPB (and director of the National Eye Institute at the National Institutes of Health), calculated during the Rio meeting that for the yearly cost of flying a different American ophthalmologist to and from Africa every two weeks, seven full-time ophthalmologists could be hired for a year and all needed equipment could be purchased. Even though there was speculation that many volunteer ophthalmologists might be willing to pay for their own transportation, this still seemed a poor use of resources from a public health point of view.

A different cost-benefit problem was raised by an ophthalmologist who had worked for many years in Africa where colleagues from the United States visited for short periods to help him (L. Schwab 1989: personal interview). He found the benefits of their assistance to be outweighed by the time required to orient them, to deal with all of the logistics of enabling them to work, to take them sightseeing (which they desired), and, in some cases, to treat them when they got sick.

Other problems with short-term volunteers were mentioned by the SEVA Foundation's Dr. Richard Litwin, based on his extensive experience in Nepal. Many Western surgeons are not prepared either for the primitive conditions outside a city like Katmandu or for the sense of helplessness they experience in a remote area where they do not speak the language, there are no restaurants, and where operating conditions (there is no equipment or even surgical gloves) are alien. The support personnel and technology needed for modern extracapsular surgery and IOL implantation are not available in many parts of the world, but

many Western ophthalmologists have never done the intracapsular operation, which has not been the operation of choice in the Western world since the 1970s. Litwin noted that expatriate physicians who go to countries like Nepal often get sick and some have come close to breaking down from frustration and culture shock. (However, Dr. Litwin also saw hidden benefits in the use of short-term volunteers: valuable personal contacts are established, research and training opportunities are developed, equipment, supplies, and professional journals are transported. By informing the pharmaceutical and equipment representatives who visit his office about his forthcoming trips, Dr. Litwin often obtains materials for use in Nepal.)

However appealing and rational these various arguments might appear, they do not suffice to explain the blindness organizations' rejection of the proposed program. The cost of many short-term volunteers versus a few full-time employees was calculated and presented as a counterargument well after the blindness organizations had demonstrated their lack of interest. Moreover, had these organizations not had deeper objections, solutions of a sort could have been found for many of the problems. For example, adequate patient follow-up arrangements could have been planned, and an orientation program developed to prepare physicians for the conditions they would encounter. Funding could have been sought from donors who were moved less by considerations of cost-effectiveness than by the idea of volunteers' providing vision to blind persons. Indeed, PVOs could have viewed the mobilization of a cadre of volunteer ophthalmologists as an opportunity to tap new sources of funding, but they did not do so.

The reasons for the rejection of the proposed initiative probably had less to do with the cost ineffectiveness of using short-term volunteers than with the incompatibility of this approach with some of the organizations' basic strategies for their programs.

### *The Question of Appropriate Technology*

The ICO's proposal came during a period of debate in the field about the appropriateness in less developed countries of IOL surgery versus the older intracapsular extraction procedure. Although the use of IOLs produces superior outcomes, IOL surgery raises questions from the public health perspective in many developing countries. It is more expensive because it takes longer and requires more highly trained personnel, more

“disposables,” and elaborate technology (e.g., surgical microscopes). The lenses themselves are ten to twenty times the cost of aphakic glasses. Many countries lack the infrastructure of facilities, technologies (and the capacity to maintain them), and personnel required for microsurgery. To change this would require a major diversion of resources and might not even be feasible.

Western ophthalmologists in clinical practice feel ethically bound to use the technology that produces the best outcomes for patients. From a public health perspective, however, the ethical picture was much less straightforward. When resources are very scarce, is it better to give some patients the ability to read a book without glasses or to offer many more patients the ability to distinguish two fingers from three? What if the patients are illiterate and want only to be able to follow the ox that is pulling a plow?

An international group assembled by WHO in 1986 gave this answer to the appropriate technology question:

There is general agreement that the safety, speed, and simplicity of the intra-capsular extraction under local anesthesia make it attractive and economic for the present purpose. Changing to the microsurgical technique of extra-capsular extraction would be dependent upon additional surgical skills and the availability of operating microscopes. Furthermore, it would incur a major decrease in the surgical output and commonly requires a subsequent surgical procedure in the posterior lens capsule. The insertion of intraocular lenses would further complicate both the surgical procedure and the follow-up care. This would again reduce the number of cases operated upon and, in addition, increase the costs. (International Agency for the Prevention of Blindness 1988)

Not all of the PVOs adhere to the view that extracapsular surgery and IOL implants are not appropriate in developing countries. PVOs like HKI that work in countries with large numbers of local medical personnel (some trained in the United States) who are steeped in the culture of curative medicine are reluctant to use antiquated procedures that produce inferior results. The idea of PVOs from a country like the United States going to less developed countries and doing obsolete procedures invites criticism, and the implication that an inferior procedure was “good enough” for the target population makes some PVOs uncomfortable (John M. Palmer III, HKI, August 24, 1989: personal interview).

However, the PVOs whose main focus is Africa and Asia viewed the ICO's proposal as entailing a shift from a cost-effective surgical approach to impractical technologies. This was a significant source of their resistance.

### *Ideologies of International Assistance*

Another deep-seated objection to the ICO proposal was rooted in the philosophy of international aid. Most of the PVOs saw their task as building countries' capacity to deal with their own problems, a goal more rooted in the public health than the medical perspective. They saw the provision of relief (whether food or medical care) as inconsistent with the goal of self-sufficiency (Jackson and Eade 1982). Providing goods or services does not enhance a recipient country's ability to produce them for itself and may foster dependency. Some PVOs that had once made heavy use of the services of "expatriate" ophthalmologists had stopped because this approach did not deal with underlying problems.

Like their counterparts in other areas of international assistance (Smith 1990), many blindness-related PVOs see themselves in the business of *development*. A program in which volunteers fly in and do surgery for a short period would help some unfortunate individuals, but it would not build national self-sufficiency. Indeed, some PVOs feared the proposed program would lead governments to *reduce* their commitments to the development of national eye care programs, moving scarce resources to activities not supported by outside help. Development-oriented PVOs believe that expending resources in potentially self-sustaining programs is wiser than using volunteers to do surgery on 100,000 cataract victims this year when there will be 100,000 more next year. The chasm between the development strategy and the ophthalmologic surgeon's approach is difficult to bridge.

Allen Foster, an ophthalmologist who had spent many years in eye care programs in Africa, used the contrast between the medical and public health perspectives to discuss a related issue. Ophthalmologists, he observed, are trained to care for individual patients, not to think in terms of the needs of populations. He cites the example of Gambia, where there are 800,000 people, 5,500 who need cataract surgery, and one ophthalmologist who does 500 eyes (not patients) per year. His view of this situation was that "American ophthalmology has no role whatsoever in Gambia" (A. Foster 1989: personal communication). He clarified by explaining that the solution for such countries lies in training



nationals, not in importing well-intentioned outsiders to do a few dozen or even a few hundred of the most modern surgical procedures.

The conflict of strategies is exacerbated by the debate about appropriate surgical approaches. As an important part of its African programs, the RCSB trains local ophthalmological clinical officers and ophthalmological nurses. These people, who are "chosen for their hands," can provide many kinds of eye care; some even do cataract extraction surgery (A. Johns 1989: personal interview). The proposed volunteer ophthalmologist program using IOLs would undercut this strategy, which was integral to RCSB's efforts to build self-sustaining national eye care programs. The work of the Western ophthalmologists might not supplement the efforts to use local personnel; instead, it might cause the locals to stop doing the cataract surgery that they knew how to do. If that happened, the proposed program might not only fail to increase the numbers of people receiving cataract surgery, but also reduce a country's ability to deal with its own problems.

For some officials of PVOs represented at the Rio meeting, the work of the American PVO, Project Orbis (which was not represented), illustrated the poor fit between modern Western ophthalmology and the needs of less developed countries, particularly in Africa. In an interview in London, Allen Foster, then the medical consultant for CBM, used the example of Mali, with seven million people, 70,000 blind people (half with cataract), and seven ophthalmologists. By his account, Project Orbis flew their large jet plane, containing surgical facilities with the most modern technology, to the airport in Bamako, performed surgery on a handful of patients, and departed for another country. The local ophthalmologists who were invited to observe then began to press their government and the PVOs working in Mali to purchase expensive equipment that they were not trained to use or maintain and that would help relatively few people. Foster characterized the program as showing people a Mercedes-Benz when resources would better be spent on hundreds of bicycles. (Project Orbis's programs have reportedly made some adjustments as a result of such criticisms.)

### Issues Raised by this Case

Several interrelated strategic and ethical issues can be seen in the initiative that did not occur. Providers of assistance to poor countries face difficult choices. Should resources be spent helping persons whose needs

are the greatest and most immediate? Or should resources be devoted to long-range, less concrete strategies designed to help host countries develop the capacity to meet the needs of future sufferers, even though this means that individuals currently in need will not be helped? Should the goal be the provision of relief or the promotion of self-sufficiency?

There is a mutually reinforcing relationship between PVOs' answer to this question and their fund-raising strategies. A contrast can be drawn between the development-oriented HKI and the more relief-oriented CBM. Much of HKI's budget comes from the U.S. Agency for International Development (AID), whose goal is economic development, not the ongoing provision of relief services to individuals; only about 20 percent of HKI's budget comes from public contributions (J.M. Palmer III 1989: personal interview). (Several of the other PVOs, including RCSB and Foresight, also receive support from developmentally oriented government agencies.) CBM is more oriented toward helping individual people and works with nongovernmental partners to do so; it raises almost all of its budget from individual contributors and receives no governmental funds (A. Foster 1989: personal interview). The contributors to this religiously oriented organization are presumably more moved by appeals to help individual blind people than by the idea of aiding the establishment of national eye care programs by distant governments.

Thus, HKI (and some other PVOs) rejected the ophthalmologists' overture because it was incompatible with their goals of promoting "in-country development" (in the words of Dr. Frank Billson of Australia's Foresight) or "sustainable programs" (as the RCSB's Alan Johns put it). By contrast, PVOs whose employees provide direct services objected to the impracticalities of short-term volunteers, microsurgery, and IOLs.

The ethical dilemmas presented by the need to choose whether to engage in long-term capacity building or to assist people who are needy here and now are inherent in the work of charitable (or other) organizations in fields where people are suffering. The perceived ethical superiority of either approach depends upon whether one is operating from the system of values and ethical traditions of public health or of medicine. One can be criticized for callousness, the other for fostering dependency.

It is worth noting, however, that the decision to expend resources in the interest of future unfortunates at the expense of current unfortunates is unusual. In a world in which the demands of those who have a voice generally take primacy—as with the federal budget deficit in the

United States, the use of nonrenewable natural resources, or in various assaults on the environment—the future is often left to take care of itself. Why might the work of relief agencies depart from this pattern?

One explanation lies in PVOs' and funding agencies' experiences of seeing temporary humanitarian efforts become permanent programs of relief, with ongoing and ever increasing requirements for financial support. Individuals who are willing to fund or carry out relief services to unfortunate people in a crisis will not necessarily want to provide such help on a routine basis to cohort after cohort, year after year. PVOs and their funding sources may be attracted by strategies that promise to create a cadre of *other* people and organizations to address the problem.

Another explanation is that the providers of assistance, rather than persons needing services, make the key strategic choices. The preferences of the cataract blind themselves were not an issue in any of my conversations with representatives of the blindness organizations, nor did any PVO at the ICO meeting base its choice not to use IOL surgery or to deploy a development strategy on the preferences of the blind themselves. Indeed, there is probably no practical way to do this; decision-making mechanisms do not exist, and large numbers of the cataract blind do not know either the reason for their blindness or that it can be reversed through surgery. The only practical participatory alternative for making decisions about program focus or strategy is to choose a partner (governmental or nongovernmental) and develop a strategy jointly. However, the choice of partners may itself determine what type of program is adopted. The PVOs that work with governments are more likely to select a broad, system-building program than are PVOs that work with local churches, missions, and hospitals, which are oriented toward helping needy individuals.

The further one moves from the individual victims in targeting efforts to help, the more likely it is that cost-effectiveness arguments will affect the allocation of resources. Applying cost-benefit criteria to supposedly humanitarian efforts can be troubling to people who are committed to relieving the suffering of individuals. Cost-effectiveness arguments may undermine the very legitimacy of the most tangible help that can be provided. Yet, for those trying to make best use of scarce resources, such arguments are a necessity.

Another ethical dilemma raised by the blindness example concerns the cost-quality tradeoff between providing a relatively few beneficiaries

with the best result or improving the lot of many people with an inferior outcome. In arguing that modern surgery and IOL implantation is an inappropriate technology for large portions of Africa and Asia, the representatives of the PVOs were substituting their judgment for that of the potential recipients of the assistance. Although this position had been reached after extensive debate in international meetings, at WHO and elsewhere, the views of the ultimate beneficiaries were not heard. (It should be noted, however, that representatives of the World Blind Union are members of the IAPB and are participants in its discussions.)

This aspect of the work of PVOs that dispense assistance to unfortunates exhibits another contrast between the medical and public health perspectives. Until fairly recently, it was seen as ethically acceptable for physicians to make important choices for patients, even deciding whether or not to inform patients about conditions that might require tough decisions. Ethical analyses and legal decisions over the past two decades have fundamentally altered this viewpoint. The change is symbolized by the concept of informed consent, which holds that physicians not only should let patients decide, but also should provide them with the information that they could reasonably be expected to desire in making the decision (President's Commission 1982). This ethical stance does not rest primarily on the fact that the patient is paying for the physician's services, but rather on a legal and ethical tradition that exalts individual autonomy.

The analogous ethical aspects of public health practice are much less straightforward. The ethics of the doctor-patient relationship are simplified by the general agreement that the physician's primary responsibility is to the individual patient. Suggestions that physicians should deny their patients the benefits of expensive treatments to preserve resources for other patients or purposes are generally greeted with consternation by a profession that clings to the ethical clarity of knowing to whom the practitioner's first obligation lies.

Such clarity is not available to agencies that provide assistance, no matter how sincere their humanitarian motives. Organizations could conceivably choose always to do their best for the next victim that appears, leaving aside the question of the cumulative effect of that stance. Such an approach, however, would guarantee that the larger context of the problem would go unattended and that a self-sustaining program would never be achieved. It would also mean that the organization would remain dependent upon individual contributions because govern-

mental agencies and large private foundations primarily fund PVOs that seek to foster development.

Organizations that provide assistance will always struggle with issues of whether to do something for the many or the best for the few, whether to assist needy individuals or to work for systemic change, whether to align with governments or to work with nongovernmental organizations. Their choices determine who will be helped, and how. The answer will probably never be a comfortable one. In the case that I studied, the choice to pursue long-range strategies designed to benefit future generations meant that thousands of people who might have been given sight by a willing cadre of ophthalmologists will be blind until they die. Such are the ethical dilemmas of helping.

## Epilogue

The call for volunteers was made at the International Congress of Ophthalmology in Singapore. Dr. Maumenee's belief was confirmed that many ophthalmologists would volunteer to do something about cataract blindness in the world. More than 300 signed up. However, as 1990 ended, no program existed in which their skills could be used, and the future of the idea of using volunteer ophthalmologists to tackle the world's cataract backlog remained, at best, uncertain.

## References

- Foster, A. 1987. Cataract Blindness in Africa. *Ophthalmic Surgery* 8:384-8.
- Foster, A., and G.J. Johnson. 1990. Magnitude and Causes of Blindness in the Developing World. *International Ophthalmology* 14:135-40.
- International Agency for the Prevention of Blindness. Ed. 1988. *World Blindness and its Prevention* (vol 3). Oxford: Oxford University Press.
- Jackson, T., and D. Eade. 1982. *Against the Grain: The Dilemma of Project Food Aid*. Oxford: Oxfam.
- Kupfer, C. 1988. Cataract. In *World Blindness and its Prevention* (vol. 3), ed. International Agency for the Prevention of Blindness, 23-5. Oxford: Oxford University Press.

- Lion, J., J. Vertrees, A. Malbon, A. Colladr and P. Mowschenson. 1990. Toward a Prospective Payment System for Ambulatory Surgery. *Health Care Financing Review* 11:82.
- Minassian, D.C., and V. Mehra. 1990. 3.8 Million Blinded by Cataract Each Year: Projections from the First Epidemiological Study of Incidence of Cataract Blindness in India. *British Journal of Ophthalmology* 74:341-3.
- Paul, B. 1954. *Health, Culture, and Community*. New York: Russell Sage.
- President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. 1982. *Making Health Care Decisions*. Washington: U.S. Government Printing Office.
- Schwab, L. 1990. *Eye Care in Developing Nations*, 2nd ed. Oxford: Oxford University Press.
- Smith, B.H. 1990. *More than Altruism: The Politics of Private Foreign Aid*. Princeton: Princeton University Press.

---

*Acknowledgments:* This research was made possible by the Lorentz Laboratory for Collaborative Enterprise, which introduced me to the activities described in this article and which arranged for private financial support for the project. I am grateful to the following people whom I interviewed as part of the research for this article: A. Edward Maumenee, professor of ophthalmology at Johns Hopkins University and president of the International Council of Ophthalmology and the International Federation of Ophthalmological Societies; Alfred Sommer, MD, then director of the Center for Preventive Ophthalmology at the Wilmer Eye Institute at Johns Hopkins University, who attended the Rio meeting as a representative of Helen Keller International; Ms. Meredith Lloyd, director of cataract programs, Helen Keller International; Mr. John M. Palmer III, executive director, Helen Keller International; Sir John Wilson, retired president of the International Agency for the Prevention of Blindness; Mr. Alan W. Johns, director, Royal Commonwealth Society for the Blind ("Sight-Savers"); Richard Litwin, MD, of the SEVA Foundation; Professor Frank A. Billson of Australia's Foresight; Larry Schwab, MD, author of *Primary Eye Care in Developing Nations*, who spent 13 years in four African countries under the auspices of the International Eye Foundation (U.S.), which he represented in Rio; Allen Foster, MBChB, FRCS, FCOphth., senior lecturer in preventive ophthalmology and medical consultant to Christoffel-Blindenmission; Terrence Gillen of the National Eye Institute and the International Agency for the Prevention of Blindness; and Bjorn Thylefors, MD, director of the World Health Organization's Programme on Blindness. I thank Mr. Johns, Ms. Lloyd, Drs. Foster, Schwab, and Sommer, and David Noonan and Brian H. Smith for comments on earlier versions of this article.

*Address correspondence to:* Bradford H. Gray, PhD, Director, Program on Non-Profit Organizations, Yale University, 88 Trumbull Street, New Haven, CT 06520-0154.