The Gift of Blood

Richard Titmuss

There is a bond that links all men and women in the world so closely and intimately that every difference of color, religious belief and cultural heritage is insignificant beside it. Never varying in temperature more than five or six degrees, composed of 55 percent water, the life stream of blood that runs in the veins of every member of the human race proves that the family of man is a reality.

The "blood is the life," says Deuteronomy (12:23). "For this is my blood of the New Testament which is shed for you" (Matthew 26:28). Ancient Egyptians were said to bathe in blood to refresh their powers, and to anoint heads with oil and blood to treat graying and baldness. Ovid describes how Aeson recovered his youthfulness after drinking the blood of his son Jason. The Romans were said to have drunk the blood of dying gladiators to imbue them with courage. Blood brother ceremonies in various countries of the world still fulfill functions of reconcilliation and other social purposes, while blood feuds—blood being repaid with blood—represented a powerful institution in medieval Europe and form part of the conventions of some societies today.

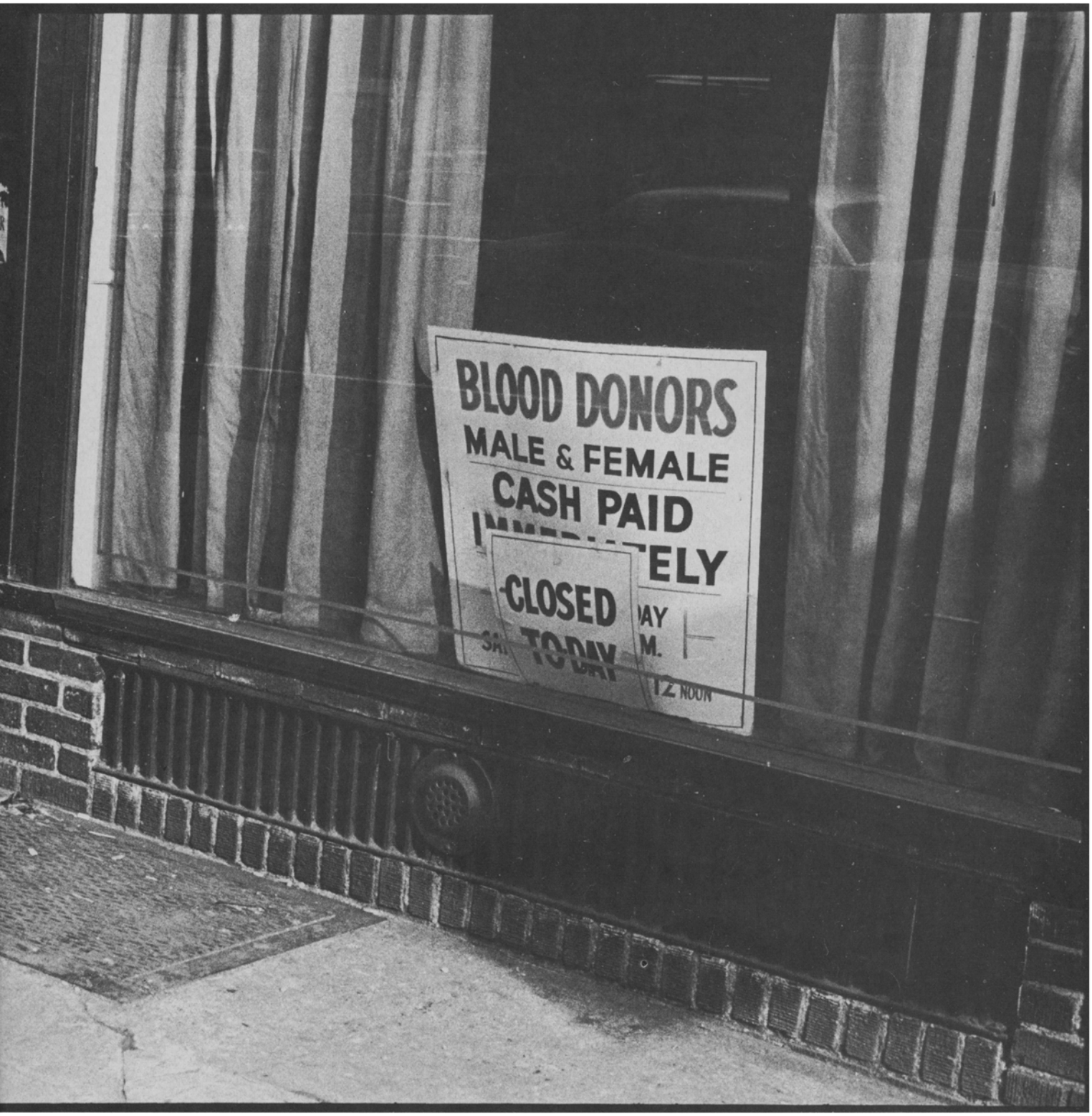
Symbolically and functionally, blood is deeply embedded in religious doctrine, in the psychology of human relationships, and in theories and concepts of race, kinship, ancestor worship and the family. From time immemorial it has symbolized qualities of fortitude, vigor, nobility, purity and fertility. Men have been terrified by the sight of blood; they have killed each other for it, believed it could work miracles and have preferred death rather than receive it from a member of a different ethnic group.

In more recent times, the growth of scientific knowledge about blood has provided us with a more rational framework. But it is only in the last 30 years or so that scientific advances have made the transfer of blood from one human being to another an increasingly indispensable part of modern medicine.

Blood transfusion represents one of the greatest therapeutic instruments in the hands of contemporary physicians. It has made possible the saving of life on a scale undreamt of several decades ago, and for conditions that were long considered hopeless. Moreover, the demand for blood increases yearly in every Western country as physicians adopt more radical surgical techniques entailing the loss of massive amounts of blood, and as new uses are found for blood, both in the saving of life and in the prevention of disease and disability.

All these scientific and technical developments in the field of blood transfusion have not only produced new and as yet unsolved problems for the biological and medical

This essay is taken from *The Gift Relationship*, to be published by Pantheon in February 1971. Copyright Pantheon 1971. *The Gift Relationship* is based on vast documentation and years of research; its scope is broadly international and it raises fundamental social, economic and political issues about modern society.



sciences, they have also set in train social, economic and ethical consequences that present society with issues of profound importance. It is part of the purpose of this essay to explore these consequences.

Blood-Banking in America

It is difficult to assemble information about the total activities of all blood-banking systems in the United States. It has been estimated that there were in 1966-68 some 9,000 central, regional and local blood banks in the United States concerned with the collection of blood from donors. Some (for example, hospital blood banks) will also be concerned with processing, cross-matching and transfusion; some have the function of producing and preparing blood components; some operate solely as collectors, distributors and suppliers of whole blood; and some provide a comprehensive community service.

This diversity of single and multipurpose agencies may be classified in terms of five distinct types of blood banks: ☐Fifty-five independent but cooperating American Red Cross Regional Blood Centers based on 1,700 participating local chapters and accounting, according to rough estimates

in 1967, for about 40 percent of total blood supplies in the United States.

☐Some 6,000 individual hospital blood banks, which perform a great variety of services and are estimated to be responsible for about 20 to 30 percent of total blood supplies.

☐About 100 nonprofit organizations known as community blood banks, which generally aim to ensure an adequate blood supply for the communities in which they are situated. These agencies also perform various services, some simply acting as collectors and distributors to hospitals, others having a wide range of functions. The community banks were thought in 1966 to account for about 15 to 20 percent of total blood supplies.

☐An unknown number of independent profit-making commercial blood banks, which generally obtain their blood supplies from paid donors, process it and sell it to hospitals at a profit. These banks were believed in the early 1960s to account for some 10 to 15 percent of total blood supplies. As we shall see, however, more recent estimates arrive at substantially higher figures. Indeed there seems to be no doubt that in recent years the percentage of blood supplied by these commercial agencies has been increasing, partly at the expense of voluntary programs.

☐An unknown number of commercial blood banks directly operated by pharmaceutical firms which rely heavily on a newly developed method of drawing blood, plasmapheresis. In nontechnical terms, this means that after the donor has given a pint of blood, the red cells are separated from the plasma (the liquid part of blood as distinguished from the suspended elements) and injected back into the donor. For the donor, the process takes less than an hour. Provided that the strictest medical standards are observed, and that the donor is in excellent health and eats a nutritious high-protein diet, it is claimed by some authorities that one individual can make several donations a week. Other authorities believe, however, that it is too soon to be certain that plasmapheresis may not involve serious long-term hazards for the donors.

Plasmapheresis of donors is used by these blood banks to obtain plasma, plasma protein components and platelets, for all of which there has been an immensely increasing demand. Various estimates in 1968 suggested that pharmaceutical firms were paying for 1 to 1.5 million donations a year yielding, with "double bleed" sessions, approximately 2 million units. A number of firms operate their own plasmapheresis centers; others obtain their supplies from "independent blood contractors." Some regular donors are, in effect, "semisalaried" and paid $150 to $200 a month for a specified number of donations; some are long-term prisoners.

National estimates of the quantities of blood collected by these different types of blood banks generally exclude the commercial plasmapheresis centers because no comprehensive figures exist as to the scale of their operations. Excluding such supplies, however, national estimates of collections in the early 1960s range from 5 to 6 million units a year. Of this total, it has been suggested that anywhere from 17 to 20 percent, and more, is provided by donors who are paid in cash for their blood. One might assume, therefore, that the remainder of the total annual collection was provided by voluntary donors. Much depends, however, on the definition of "voluntary donor."

The Gift Relationship

To "donate" is to give implying an altruistic motive. Strictly and perhaps more neutrally speaking, "suppliers" should replace "donors" in the vocabulary of this study, as we shall see presently. We will, however, conform to the common usage, even though it is somewhat misleading.

To obtain sufficient quantities of blood in the required blood group proportions, at the required times and in the required places are not processes that can be determined and controlled by the medical profession alone, despite its power to decide who may and who may not give and the destination of the gifts. To give or not to give, to lend, repay or even to buy and sell blood—these are the questions that lead us beyond any one profession into the fundamentals of social and economic life.

The forms and functions of giving embody moral, social, psychological, religious, legal and aesthetic ideas. They may reflect, sustain, strengthen or lessen the cultural bonds of the group, large or small. They may inspire the worst excesses of war and tribal nationalism or the tolerances of the community. They may contribute to integrative processes in a society (binding together different ethnic, religious and generational groups), or they may spread, through separatist and segregationist acts, the sense and reality of alienation—as in South Africa and the southern states of the United States.

Customs and practices of noneconomic giving—unilateral and multilateral social transfers—thus may tell us much (as Marcel Mauss so sensitively demonstrated in his book *The Gift*) about the texture of personal and group relationships in different cultures, past and present. But the gift of blood has about it certain unique attributes that distinguish it from other forms of giving. We enumerate some of these now; all derive from the assumption that the gift is a voluntary, altruistic act:

☐The gift of blood takes place in impersonal situations, sometimes with physically hurtful consequences to the donor.

☐The recipient is in almost all cases not personally known to the donor; there can, therefore, be no personal expressions of gratitude or of other sentiments.

☐Only certain groups in the populations are allowed to give; the selection of those who can is determined on rational and not cultural rules by external arbiters.

☐There are no personal, predictable penalties for not giving, no socially enforced sanctions of remorse, shame or guilt.

☐For the giver there is no certainty of a corresponding gift in return, present or future.

☐No givers require or wish for corresponding gifts in re-

turn; they do not expect and would not wish to have a blood transfusion.

☐In most systems, there is no obligation imposed on the recipient himself to make a corresponding gift in return.

☐Whether the gift itself is beneficial or harmful to an unknown recipient will depend to some extent on the truthfulness and honesty of the giver. Moreover, the intermediaries—those who collect and process the gift—may determine in certain systems whether it is potentially beneficial or harmful.

☐Both givers and recipients might, if they were known to each other, refuse to participate in the process on religious, ethnic, political or other grounds.

☐Blood as a gift is highly perishable (its value rapidly diminishes), but neither the giver nor the recipient wields any power in determining whether it is used or wasted.

☐To the giver, the gift is quickly replaced by the body. There is no permanent loss. To the recipient, the gift may be everything: life itself.

The Source of Blood

There are many myths in all societies, and America is no exception. One of the most deeply held myths in this country today is that the voluntary donor is the norm, that most blood donations are contributed by volunteers.

In weighing the truth of this myth, one should bear in mind the many inadequacies, gaps and errors in the statistical data. At various points in the breakdown of types of donors that follows, we have been forced to employ what one can only call "informed guesswork" based on months of work tabulating, checking and comparing the statistics in all the survey reports since 1956. In general, we believe we have erred on the conservative side in our estimates of the proportions of paid blood supplies. However, with these cautions in mind, we now sum up these approximate figures:

ESTIMATES OF SOURCE OF BLOOD (INCLUDING PLASMAPHERESIS PROGRAMS) COLLECTED BY TYPE, UNITED STATES, 1965–67

The Paid Donor The Professional Donor	47%
The Paid-Induced Voluntary Donor	3
The Responsibility Fee Donor The Family Credit Donor	39
The Captive Voluntary Donor	4
The Fringe Benefit Voluntary Donor	0
The Voluntary Community Donor	7
Total	100

This table shows that about one-third of all donations were bought and sold (types A,B and C). Approximately 52 percent (types D and E) were "tied" by contracts of various kinds; that is, these donations represented the contracted repayment in blood of blood debts, encouraged or enforced by monetary penalties. Some of these donors will have themselves benefited financially, and some will have paid other donors to provide the blood. About 5 percent were captive voluntary donors—members of the armed forces and prisoners. About 9 percent approximated the concept of the voluntary community donor who sees his donation as a free gift to strangers in society.

But this picture is incomplete. We have already noted the recent growth of plasmapheresis programs operated by commercial banks and pharmaceutical firms. Their annual harvest of 2 million units has had the effect of making the contribution of the voluntary donor an even less significant one in the United States, for almost all of these units were bought: some from registered, quasi-salaried donors, some from "walk-in", irregular and occasional donors. In all, perhaps 400,000 or so different individuals are paid for this yield of 2 million units a year.

We now have to add these estimates to the totals in Table 1. The effect is to raise the annual national collection total to 8 million units and the combined figure for types A and B ("paid" and "professional" donors) to 3,737,800 units. The adjusted percentages are:

ESTIMATES OF SOURCE OF BLOOD COLLECTED BY TYPE, UNITED STATES, EACH YEAR, 1965–67

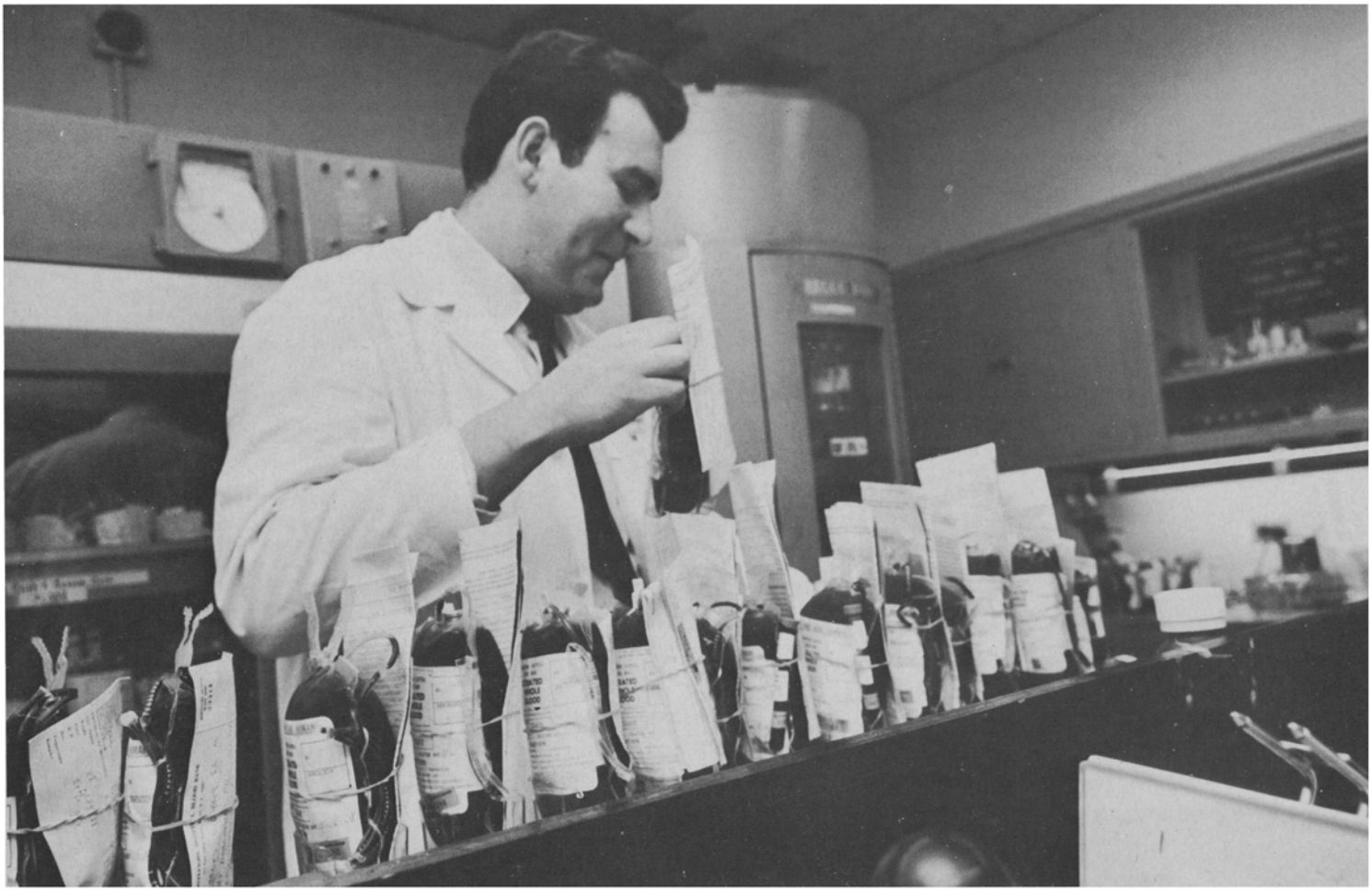
Type	Number of Units	
The Paid Donor The Professional Donor	1,737,800	29%
The Paid-Induced Voluntary Donor	211,600	4
The Responsibility Fee Donor The Family Credit Donor	3,188,000	52
The Captive Voluntary Donor	324,800	5
The Fringe Benefit Voluntary Donor	26,500	1
The Voluntary Community Donor	561,300	9
Total	6,000,000	100

On the basis of 8 million units a year, then, approximately one-half are bought and sold. The contribution of the voluntary community donor is only 7 percent.

Apart from the great increase in paid plasma donations, all the evidence we have brought together suggests that the proportion of paid donations in the country as a whole has increased in recent years. Thirteen years ago the Joint Blood Council survey estimated the proportion of paid donations for the country as a whole at about 14 to 17 percent. It would seem, therefore, from Table 1 that the proportion has doubled and, if the 2 million plasma donations are included, trebled.

The only other trend figures that have been published relate to New York City. The proportions of paid donations were: 1952, 14 percent; 1956, 42 percent; 1966, 55 percent. The proportion of voluntary community donations fell from 20 percent in 1956 to about 1 percent in 1966.

As the blood transfusion services of the United States become increasingly dependent on the paid or professional donor, it is important that we have some sense of the social characteristics of those who sell their blood. A survey we conducted in 1968 was in part designed to produce some evidence on this matter. In all, I received statistics from a large number of commercial banks (some operated by pharmaceutical firms) accounting for some 366,000 units of blood. While very few appear to maintain detailed records on their sources of supply with respect to age, sex, marital status and other characteristics, many provided



summary accounts. It would seem that most paid donors (apart from those in prisons, in the armed forces or university students) fall into three categories:

☐"Professional donors"—registered donors who contribute regularly and who are paid on a fee basis or are semisalaried (this category figures largely in the plasmapheresis programs).

☐"Call-in" donors—individuals (perhaps with less common blood groups) who are on a register of some kind and who respond to a call for blood on payment of a fee of $5 to $15 or more.

☐"Walk-in" donors, who may be attracted by advertisements, who are paid $5 or more a pint depending on local circumstances, such as the extent of the shortage of blood and other market considerations.

Many commercial blood banks, often open (at least in New York) from 7:30 in the morning to midnight, are better placed to attract walk-in donors because their "store fronts" are located in Negro and ghetto areas. In 1966, according to one journalistic report, voluntary and private hospitals bought 100,000 pints of "Skid Row blood from New York City's 31 pay-for-blood stores." The hospitals paid $35 a pint or more for the blood. A typical journalistic account which appeared in 1963 described the scene at one of these blood banks:

> A bleary-eyed, vacant-faced man shuffles up to a building in an industrial part of town, checks the address with a scrap of paper in his shaking hand, and walks inside. In a bleak third-floor office, he joins a number of other men, many derelicts like himself. One by one they are summoned to a desk where an attendant asks a few quick questions and directs them to an inner room.
>
> This is not a flophouse. It is not an employment agency or a social service bureau for weary, homeless men. This is a blood donor center.

Similar accounts have appeared since 1963 of conditions in commercial blood banks in Chicago, Seattle, Georgia, Cleveland, Boston, Miami, Detroit, Cincinnati, Los Angeles, San Francisco, Washington, Baltimore, Philadelphia, New Jersey, Kansas City and many other places in addition to New York.

Most of these accounts, however, are not the products of keen-eyed journalists but of physicians concerned about the problem of serum hepatitis. We will discuss this problem in a moment. Meanwhile, we conclude that, despite all the statistical inadequacies in the data on blood transfusion services in America, the trend appears to be markedly in the direction of the increasing commercialization of blood and donor relationships. Concomitantly, we find that proportionately more blood is being supplied by the poor, the unskilled, the unemployed, Negroes and other low income groups and, with the rise of plasmapheresis, a new class is emerging of an exploited human population of high blood yielders. Redistribution in terms of "the gift of blood and

blood products" from the poor to the rich appears to be one of the dominant effects of the American blood-banking systems.

Truth, Trust and Hepatitis

To the recipient the use of human blood for medical purposes can be more lethal than many drugs. The transfusion and use of whole blood and certain blood products carries with it the risk of transmitting disease, particularly serum hepatitis, malaria, syphilis and brucellosis. Not only are there risks in infected blood and plasma but there are also risks in the use of contaminated needles and apparatus in the collection and transfusion processes.

In the United States and other modern societies the most dangerous of these hazards is serum hepatitis. It is becoming a major public health problem throughout the world. No scientific means have yet been found to detect in the laboratory the causative agents of hepatitis in the blood before it is used for a transfusion or for conversion into various blood products. The quantity of infected blood that can transmit hepatitis may be as little as one-millionth of a milliliter. The absence of a scientific check on quality and safety means that the subsequent biological condition of those who receive blood constitutes the ultimate test of whether the virus was present in the donation; in effect, therefore, the patient is the laboratory for testing the quality of the gift of blood.

But few—if any—patients know that their bodies perform this role. They do not ask and in most cases are in no condition to ask: Will this blood cause hepatitis? Who supplied it? In what circumstances? What safeguards were employed to ensure as far as humanly possible that this blood is not going to harm or kill me? Even if such questions were asked, it has to be recognized that they could not be satisfactorily answered by those administering transfusions or blood products.

In these situations of consumer ignorance and uncertainty, as in many others in the field of medical care, the patient has to trust the medical profession and the organized system of medical care. He has no alternative but to trust. If, subsequently, he develops hepatitis and it is clinically diagnosed as such (which in many instances it is difficult to do), it is still virtually impossible in most cases to establish a causal relationship and to connect the infection or the ill health to the blood transfusion or the blood product. Many complex factors are involved in these difficulties of diagnosing, identifying and naming the causal agent(s), one being the long incubation period in serum hepatitis—possibly up to six months.

Not only, therefore, has the patient no alternative to trust when receiving blood but, subsequently, and apart from a very small proportion of obvious cases of infection where causal attribution can be established, he can have no redress. He is not only unknowingly the laboratory test of "goodness," he and his family must bear the biological, social and economic costs of infected blood and misplaced trust in terms of physical incapacity, loss of earnings and career prospects, the effects on family life and other unquantifiable factors. These costs may be mitigated, but they may never be entirely eliminated. In many cases, the costs are irreversible.

For these and many other reasons those responsible for blood transfusion services have stressed the great importance of maintaining the most rigorous standards in the selection of donors. The state of health, the health history and the social habits of the donor become crucial because the laboratory cannot identify the virus. Again, however, there are definite limits to the clinical assessment of "health"; no single test or battery of liver function tests has yet been devised which will reliably distinguish carriers of the virus from "normal" subjects.

A great deal depends, therefore, on the truthfulness of the donor in the processes of medical examination, history taking and selection. Just as the recipient of blood has to trust the doctor, so the doctor has, within limits, to trust the giver. Those responsible for making medical decisions and administering blood have to act in certain circumstances on the assumption that donors have been truthful. In situations of total ignorance and total helplessness this is one social right the patient has—the right to truthfulness. Essentially, this is because he can exercise no preferences, and because one man's untruthfulness can reduce another man's welfare.

In different blood donation systems, therefore, we are led to ask: What particular set of conditions and arrangements permits and encourages maximum truthfulness on the part of donors? To what extent can honesty be maximized? Can this objective be pursued regardless of the donor's motives for giving blood? What principles should the medical profession, in the interests of patients and of the profession, consider as fundamental in the organization and operation of blood donor programs?

Is the Gift a Good One?

Martin L. Gross has summarized the evidence on the risks of hepatitis:

> Hepatitis is the most widespread transfusion danger for the hospital patient, the result of contaminated blood. Its exact toll is elusive, but the *Journal of the American Medical Association* has editorially indicated that the hepatitis transfusion problem is significant and considerably more prevalent than previously thought. "It has been reliably shown," (ran the editorial), "that an essential therapeutic measure, blood transfusion, causes death in approximately one of every 150 transfusions in persons over 40 years of age as a result of serum hepatitis. Since this is the age group to which most blood transfusions are given, and since many hundreds are given daily, such a high fatality rate becomes a problem."

Key area studies—in Chicago, New Jersey, Philadelphia, Los Angeles and Baltimore—which have carefully followed up transfused patients are discouraging. The hepatitis

scourge, they show, strikes about one in 25 to 50 patients, with sizable death rates of up to 20 percent of those stricken. "It appears that the incidence of hepatitis after blood transfusion is greater than prior estimates have indicated," states Dr. John R. Senior, a Philadelphia researcher. Dr. Garrott Allen of Chicago has reported hepatitis danger so extensive that it surprised the most inured of the profession: 3.6 percent of all transfused hospital patients later contracted the disease (the risk rises with the number of units transfused). Judging from these samples, there may be 75,000 cases of hepatitis yearly, with almost 10,000 deaths.

More optimistic statistics have been garnered in Boston by Tufts University School of Medicine researchers with a hopeful transfusion rationale for the future. A 12-year study of the nine Boston teaching hospitals has produced only 171 patients rehospitalized for posttransfusion hepatitis, 12 percent of whom died. Since their total study represents about 5 percent of the nation's one-year blood use, we might thus expect 3,500 cases nationally. The actual toll of blood transfusion hepatitis is possibly between the extremes of the Boston and Chicago studies.

One of the main keys to preventing hepatitis after transfusion, the Boston physicians found, was in the careful checking of the source of the blood. The epidemic-like hepatitis in other cities, they believe, is a direct result of prebottled blood supplied by commercial sources: 40 percent of the blood in the Chicago sample was bought, and more than 75 percent of the blood in the Baltimore group was commercial. In the teaching hospitals of Boston, conversely, none of the blood was purchased from commercial blood firms.

"No matter what method of case finding was used, the lowest incidence of post-transfusion hepatitis was seen when commercially supplied blood was avoided," state the Tufts University researchers.

Dr. Allen, one of the foremost authorities in the United States, has shown in a series of studies that the risk of serum hepatitis from transfusions derived from prison and skid row populations is at least ten times that from the use of voluntary donors.

> This greater risk rate is attributed to the fact that the paid donor is often a cloistered resident of Skid Row where he and his colleagues are alleged to enjoy frequently the practice of the communal use of unsterile needles and syringes for the self-administration of drugs. These rates increase with the numbers of transfusions, but they do not continue as a linear relationship after the first 5 or 6 units are given. There are also other unsanitary practices that prevail among this kind of population which favor repeated exposures to infectious hepatitis as well. Still another contributing factor, allegedly higher in this group than in the general population, is that of alcoholism, which appears to make such individuals more susceptible to an initial attack of either infectious or serum hepatitis.

A later study (in New Jersey) showed that the risk of hepatitis "developing in recipients of blood known to have been donated by convicted or suspected narcotics addicts was 70 times that in the controls."

Donors and Disease

Over the past decade many studies in different parts of the United States have incriminated the paid donor (and blood obtained from commercial blood banks) as the major source of infection. The most recently reported of these studies was conducted by Dr. Paul Schmidt and his colleagues at the National Institutes of Health, Bethesda.

This was a controlled prospective study (unlike many previous retrospective ones) of two groups of patients 21 years and older who were undergoing cardiac surgery at the National Institutes of Health hospital. There were no significant differences between the groups with respect to age, sex, type of heart disease, type of operation and severity of preoperative symptoms. One group received 94 percent of their blood from one or both of two commercial blood sources employing paid donors (in the Mississippi Valley area and an East Coast port city). The second group received 97 percent of their blood from voluntary donors in the Washington area. The average number of units of blood transfused per patient was 18.5 in the commercial group and slightly more (19.6) in the voluntary group.

In the commercial group, the total hepatitis attack rate was 53 percent; in the voluntary group, nil. This study suggests not only that there is an extremely high attack rate among cardiac surgery cases (average age 47) transfused with paid blood in the United States but also that an immense number of cases of infection are at present undetected. Because the number of patients involved was small (a total of 68), surveillance of the hepatitis risk is being continued and expanded on a nationwide basis. Further studies are also under way to eliminate the possibility of a geographic factor (because some of the paid blood was obtained from the Mississippi Valley area).

Nor is the problem of serum hepatitis confined to the use of whole blood. There is a serious risk in the use of whole pooled plasma and certain blood products, the production of which has been, as we saw, greatly aided by the use of plasmapheresis programs. It has been argued, however, that, compared with the hepatitis risks involved in the use of walk-in, irregular, skid row donor types, more regular selected, longer-term plasmapheresis donors have a lower carrier rate. But a great deal depends here—as it does with all donors—on two factors: the precise nature of external quality and safety controls exercised by some scientific supervisory agency (even though there are limits to effective screening) and, second, the degree of *continued* truthfulness among paid donors.

As to the controls, it has been repeatedly shown in the United States that the official public health standards designed to insure the continued safety, purity and potency of biological products are only minimal standards and in many cases are either inapplicable, inadequate or ineffective (partly because of the inherent difficulties of continually inspecting and checking all procedures at blood banks).

"Under the standards set by the National Institutes of Health, an ancient physician, a nurse and a former bartender can theoretically combine their resources to form a blood bank. They can draw most of their blood from skid-row donors at the minimum fee and sell their blood to hospitals that seek the lowest bidder and are not concerned with the scientific aspects of blood banking." Moreover, the great expansion during 1968-69 in chains of profit-making hospitals (newly built hospitals as well as voluntary hospitals bought by some 33 nationwide investor-owned companies) is likely to increase the risks as more blood is purchased from commercial banks. Altruistic donors can hardly be expected to give their blood to profit-making hospitals.

With regard to the issue of truthfulness, again it has been repeatedly shown that paid donors—and especially poor donors badly in need of money—are, on average and compared with voluntary donors, relatives and friends, more reluctant and less likely to reveal a full medical history and to provide information about recent contacts with infectious disease, recent inoculations and about their diets, drinking and drug habits that would disqualify them as donors.

Prisoners of Commerce

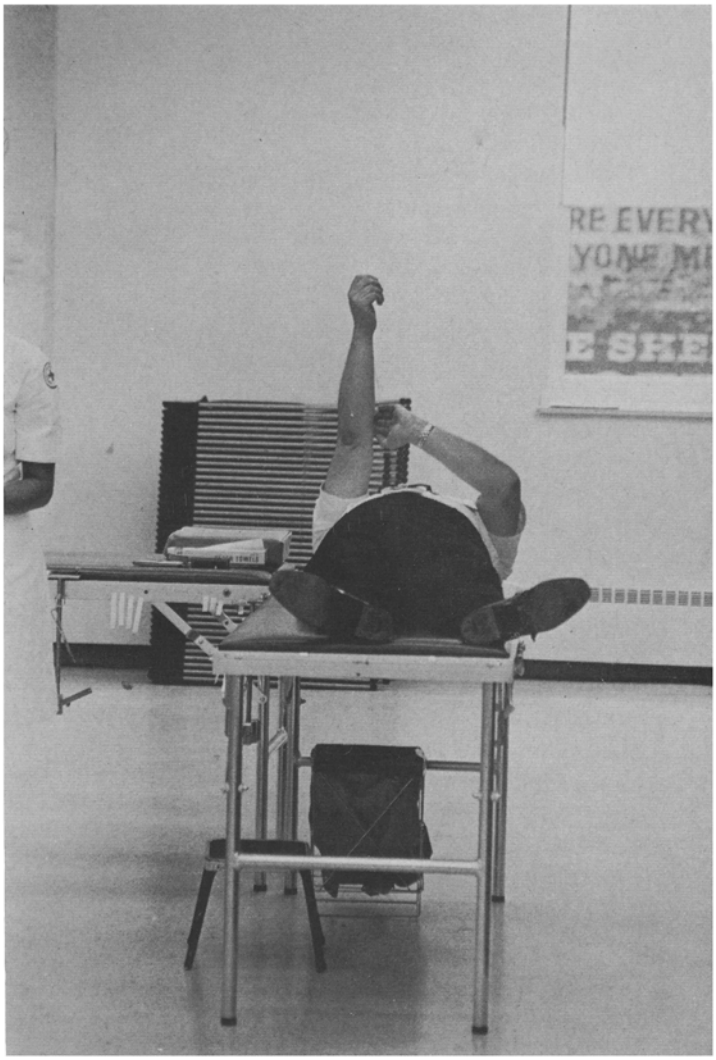
The hazards involved in the commercial blood transfusion system, both to the American people and internationally, were made more explicit in 1969 by reports on the activities of Southern Food and Drug Research and its associated corporations. These corporations, operating in three states, acted as "intermediate contractors" to some 37 major American pharmaceutical firms, a number of which have large international markets. Their main role, as commercial enterprises, was to supply plasma, hyperimmune immunoglobulin and other products and to carry out clinical trials on human beings of proposed new pharmaceutical products. The supply of hyperimmune immunoglobulin (used for therapeutic purposes in connection with mumps, whooping cough, tetanus and smallpox) involved vaccinating donors to build up the antibodies in the plasma. The technique mainly used was plasmapheresis.

With the assistance of prison physicians (some of whom were renumerated by these corporations) extensive use was made of prisoners (who were paid for taking pills, vaccinations and supplying plasma) from 1962 to 1969. In all, these corporations are said to have conducted between 25 and 50 percent of the initial drug tests (or first-phase tests usually carried out on healthy subjects) annually undertaken in the United States.

A series of investigations and inquiries into the activities of these corporations reported:

☐Potentially fatal new compounds have been tested on prisoners with little or no direct medical observation of the results.

☐Prisoners failed to swallow pills, failed to report serious reactions to those they did swallow and failed to receive careful laboratory tests.



☐Control records for validation purposes were totally inadequate, plasmapheresis rooms were "sloppy," and gross contamination of the rooms containing donors' plasma was evident.

☐One prisoner on plasmapheresis received back another man's red cells and was seriously damaged for life.

☐Another prisoner, injected with a whooping cough vaccine, died.

☐Large outbreaks of hepatitis occurred at various prisons, involving over 1,000 prisoners of whom at least six died.

☐It is alleged that several agencies of the Department of Health, Education and Welfare knew for years about the activities and standards of these corporations and did not curtail or stop them.

☐Many internationally known pharmaceutical firms knew of the standards of medical supervision, laboratory and quality control being exercised by these corporations. No concerted or collective action was taken to stop using these intermediaries. Some firms remained the biggest consumers of Southern Food and Drug Research and its associated corporations. Those who were still using these facilities in 1969 are reported to have defended the validity of the data provided.

This is only a brief summary of an immense amount of

documentation available in the United States. We have not included here much material raising ethical and political issues similar to those made explicit in the Nuremberg Code.

This case—or series of cases—is relevant in a number of ways to the problems raised here: the issues of donor "truthfulness," theories of social costs in relation to blood and blood products and questions of safety, purity and potency.

In private market terms, we see that "untruthfulness" was maximized at many points in the system, from the prisoners themselves to officials employed by the pharmaceutical firms. The social costs involved extend far beyond the areas of cost-benefit analysis conventionally studied by economists and statisticians. They embrace the prisoners and their families (many of whom were Negroes), the prison system itself, the medical profession, the pharmaceutical industry in the United States and the consumers of these products not only in the United States but in many countries of the world.

At least one conclusion can be drawn at this point. Governmental systems of licensing, inspection and quality validation appear to be helpless to control private markets in blood and blood products. Their ineffectiveness has contributed in recent years to the phenomenon in the United States of numerous legal suits based on negligence, implied warranty and various food and drug acts. What is involved, of course, is the question whether blood transfusion is a commercial transaction or a professional service.

"Social" Versus "Economic"

All these issues were crystallized and debated in the now famous Kansas City case of 1962. Before we pursue them it is instructive to review the causes and implications of this particular event. Briefly, the facts are these.

In 1953 a meeting of doctors, pathologists, hospital administrators and local citizens decided to form a nonprofit community blood bank in Kansas City. There was a need for more blood which the local hospital blood banks were not fully supplying, and the local branch of the American Red Cross was at the time channeling the blood it collected to the armed forces in Korea. For the next two years there were endless disputes among the various interests involved (which need not concern us here) about power, institutional control and finance. Then, in May 1955, a commercial blood bank (calling itself the Midwest Blood Bank and Plasma Center) started operations.

The bank was owned and operated by a husband and wife team. The husband had completed grade school, had no medical training and had previously worked as a banjo teacher, secondhand car salesman and photographer. The blood bank procedures seem to have been actually directed by the wife. She called herself an RN but was not licensed as a nurse in either Kansas or Missouri and did not show any evidence of experience or training in blood banking. Originally there had been a third partner, but he had been chased out of the bank by the husband with a gun. A medical director was appointed to comply with public health regulations. He was 78, a general practitioner with no training in blood banking. The bank was inspected and licensed by the relevant federal authority, the National Institutes of Health.

Situated in a slum area, the blood bank displayed a sign reading "Cash Paid for Blood" and drew blood from donors described as "skid row derelicts." It was said by one witness to have "worms all over the floor." In 1958 another commercial bank, the World Blood Bank, was established in Kansas City and also began operations.

From 1955 onwards pressures of various kinds were brought to bear on relatives of hospital patients, members of associations and trade unions to provide blood on a replacement basis to these commercial banks. But local hospitals refused to accept blood from these sources to discharge patients' blood fees. These and other developments seem to have forced a solution to the disputes over the control of the nonprofit community blood bank, and in April 1958 it commenced operations. Subsequently, it appears from the evidence that practically all the large local hospitals entered into blood supply contracts with the Community Blood Bank and ceased operating their own banks. The Community Blood Bank thus had a virtual monopoly.

The two commercial banks then complained to the Federal Trade Commission alleging restraint of trade. In July 1962, after an investigation lasting several years, the commission issued a complaint against the Community Blood Bank and its officers, directors, administrative director and business manager; the Kansas City Area Hospital Association and its officers, directors and executive director; three hospitals, individually and as representatives of the 40 members of the hospital association; 16 pathologists; and two hospital administrators.

The complaint charged the respondents with having entered into an agreement or planned course of action to hamper and restrain the sale and distribution of human blood in interstate commerce. They were charged with conspiring to boycott a commercial blood bank in the sale and distribution of blood in commerce, and that the conspiracy was to the injury of the public and unreasonably restricted and restrained interstate commerce in violation of Section 5 of the Federal Trade Commission Act of 1952. This section of the act declares that "uniform methods of competition in commerce, and unfair or deceptive acts or practices in commerce, are declared unlawful." Violation of a commission "cease and desist order," after it becomes final, subjects the violator to civil penalties up to $5,000 for each day the violation continues.

The respondents appealed. After lengthy hearings before an examiner for the commission in 1963, a further appeal and more hearings before the full Trade Commission of five members, a ruling was issued in October 1966. By a majority of three to two the commission decided that the Community Blood Bank and the hospitals, doctors and pathol-

continued on page 62

 continued from page 26

ogists associated with it were illegally joined together in a conspiracy to restrain commerce in whole human blood.

Part of the Federal Trade Commission's case that blood was an article of commerce was based on arguments for extending the doctrine of implied warranty (fitness for use) in the financial interests of consumers—in short, to make it easier for them to sue doctors, hospitals, blood banks, laboratories and so forth. A doctor should, for example, be found guilty of negligence if he obtained human blood from a bank that failed to meet adequate standards; he "should have known" that the hepatitis virus was present in the blood. This doctrine could be extended to all other areas of medical practice as well as to other service relationships. Nonprofit hospitals would be regarded as engaged in trade or commerce for profit. Until 1964 hospitals, like churches, schools, colleges, universities, public libraries and charitable institutions not operated for profit, were exempt from the price discrimination provisions of the United States Code.

Costs of the Market System

The American Medical Association, in protesting the Federal Trade Commission ruling in the Kansas City case, warned hospitals and doctors to change their "billing" practices and not to state the charge for blood as a separate charge. This proposal put the American Medical Association in a dilemma, however, for it struck at the basis of competition in private medical care and the association's own announced support of commercial blood banks in 1964. Other interests found themselves confronted with similar dilemmas. Pathologists and physicians working in privately owned clinical laboratories, for example, found themselves arguing against the profit motive. This was not a small group for, in 1967, 95 percent of all clinical laboratories in the United States certified for participation in the Medicare program were under commercial proprietary control. Most of them were approved for hematology tests. Commercial blood insurance companies, however, strongly supported the Federal Trade Commission's ruling in the interests of competition and "sound business practices." They were joined by sections of the pharmaceutical industry who did not wish to see commercial blood banking discouraged by "restrictive practices."

In January 1969 the Federal Trade Commission's ruling of 1966 in the Kansas City case was set aside by the Eighth United States Circuit Court of Appeals in Saint Louis. Up to the end of 1969 no appeal had been made to the Supreme Court.

Though this may be the end of this particular case, the fact that it happened is one illustration among many of the increasing commercialization of the blood-banking system and of hospital and medical services in general. This trend must logically lead to more and more recourse to the laws and practices of the marketplace. There is no inconsistency in this development. If blood as a living human tissue is increasingly bought and sold as an article of commerce and profit accrues from such transactions, then it follows that the laws of commerce must, in the end, prevail. What this trend holds in store for the future of medicine in the United States as legally it is increasingly treated as a trade and as the doctrine of charitable immunity disappears into the mists of history is not a matter for this particular study. To consider all such legal ramifications would eventually lead us away from law and into the broader issues of medical ethics, the purpose of medicine and, ultimately, the value of human life.

Nevertheless, the choice of blood as an illustration and case study was no idle academic thought; it was deliberate. Short of examining humankind itself and the institution of slavery—of men and women as market commodities—blood as a living tissue may now constitute in Western societies one of the ultimate tests of where the "social" begins and the "economic" ends. If blood is considered in theory, in law and is treated in practice as a trading commodity, then ultimately human hearts, kidneys, eyes and other organs of the body may also come to be treated as commodities to be bought and sold in the marketplace.

Profitable competition for blood "is a healthy thing," it is argued by some in the United States. It improves services, increases supplies of blood and is the answer to a "shiftless, socialistic approach." If competition for blood were eliminated, it is warned, it would "be the entering wedge for the

In Future Issues

FEBRUARY

Switzerland:
The Price of Modernization

Pakistan:
Making the Rich Richer

Detroit:
Rumor Splits the City

People, Cats and Dogs

destruction of our entire antimonopoly structure" and would threaten the interests of "great pharmaceutical companies."

In London, two authors, writing in a 1968 publication of the Institute of Economic Affairs, urged that payment of donors and competition for blood be introduced in Britain, where all blood is now given voluntarily, and where the incidence of tainted blood is virtually nil. Productivity would rise, the writers argue; supplies of blood would increase; "a movement towards more efficiency in the blood market is a movement towards more efficiency in the economy as a whole." The editor, Arthur Seldon, in a preface said that the authors "have made an unanswerable case for a trial period in which the voluntary donor is supplemented by the fee-paid donor so that the results can be judged in practice, and not prejudged by doctrinaire obfuscation."

In essence, these writers, American and British, are making an economic case against a monopoly of altruism in blood and other human tissues. They wish to set people free from the conscience of obligation. Although their arguments are couched in the language of price elasticity and profit maximization, they have far-reaching implications for human values and all "social service" institutions. They legitimate, for instance, the great increase since 1967 in the number of commercial hospitals in the United States.

The moral issues that are raised extend far beyond theories of pricing and operations of the marketplace. Moreover, they involve the foundations of professional freedom in medical care and other service relationships with people, the concept of the hospital and the university as non-profit-making institutions and the legal doctrine in the United States of charitable immunity. Charitable enterprises in that country would be subject under competitive conditions to the same laws of restraint and warranty and have the same freedoms as businessmen in the private market.

Is medical care—analyzed in its many component parts, such as blood transfusion services—a consumption good indistinguishable from other goods and services in the private economic market? What are the consequences, national and international, of treating human blood as a commercial commodity? If blood is morally sanctioned as something to be bought and sold, what ultimately is the justification for not promoting individualistic private markets in all other component areas of medical care, social work skills, the use of patients and clients for professional training and other "social service" institutions and processes?

Where are the lines to be drawn—can indeed any lines at all be pragmatically drawn—if human blood be legitimated as a consumption good? To search for an identity and sphere of concern for social policy would thus be to search for the nonexistent. All policy would become in the end economic policy, and the only values that would count are those that can be measured in terms of money and pursued in the dialectic of hedonism. To abolish the moral choice of giving to strangers could lead to an ideology to end all ideologies. This study, in one small sector of human affairs, disputes both the death of ideology and the philistine resurrection of economic man in social policy. It is thus concerned with the values we accord to people for what they give to strangers, not what they get out of society.