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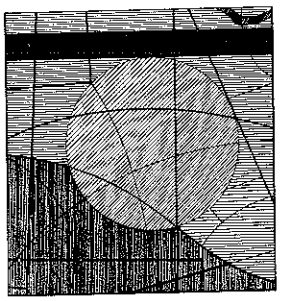
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organized by the Pontifical Council for Pastoral Assistance to Health Care Workers

TO LIVE: WHY? AIDS



November 13-15, 1989

Vatican City Synod Hall

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The illustrations in this issue are taken from Giorgio Lise's **The Ceramics of Lodi** *(Lodigraf, 1981). The works reproduced date from the fifteenth to the eighteenth century.*

THE POPE GREETS SOME OF THOSE ATTENDING THE FOURTH INTERNATIONAL CONFERENCE



THE ADDRESS OF HIS HOLINESS JOHN PAUL II TO PARTICIPANTS IN THE CONFERENCE

The Church in the Face of the Twofold Challenge of AIDS: Prevention in Keeping with the Dignity of the Human Person and Truly Solidary Care

1. It is a particularly important moment for me to meet today with all of you in this International Conference which the Pontifical Council for Pastoral Assistance to Health Care Workers has promoted for the purpose of deepening the interdisciplinary study of the complex problems related to the threatening spread of AIDS.

In greeting you, I wish to express my heartiest congratulations for your commitment to discuss this vitally interesting subject on such a highly qualified level, and particularly, for your having formulated its analysis in a broader anthropological framework, examining the entire question in the light of fundamental questions on existence: " TO LIVE: WHY? "

For this reason, it is my hope that the conclusions of this International Conference stimulate further thought on the question, and promote in the competent bodies a decisive and efficacious plan of action.

2. Compared with the many other infectious diseases known by Mankind in the course of history, AIDS has by far many more *profound repercussions* of a moral, social, economic, juridical and structural nature not only on individual families and on neighborhood communities, but also on Nations and on the entire community of peoples. In fact, although in differing intensity and with varied characteristics, the great majority of the world's nations has been struck by the acquired immunodeficiency virus, and the periodic announcements of the Health Authorities indicate *an increasing extension*.

It is right to recognize that, from the initial stages, AIDS has provoked a serious commitment to team research directed by eminent scientists, many of whom are present here today, and to whom I wish to express my most heartfelt appreciation.

Thanks to their efforts, every day there is greater light shed upon the various aspects relative to this complex and widespread disease. In less than a decade, *an important stretch of the road* has been covered: molecular biology studies have nearly made known the functions of the virus, the virus-cell interactions, and their consequent functional modifications. Other retroviruses have likewise been discovered, and their functions relative to AIDS and other diseases are the object of intensive study and evaluation.

3. It is not at all daring to affirm that, once again, through the study of a dreadful disease, scientific knowledge is broadening to cover a whole area, with important advantages afforded for the treatment of other pathologies.

And, moreover, as our times are characterized by the growing awareness that biological causes, environmental conditions, and sociocultural components all strongly influence the development and spread of infectious diseases, particular analytical attention has been given to the way in which certain forms of interactional behavior within particular demographic types or groups create and increase the risk of contagion from the acquired immunodeficiency virus. The reference, already well known to all, is obviously to the phenomena of drug addiction and the abuse of sexuality which leads to a process that is expansionist at its base. The positive side of this more exact knowledge is that the world population as a whole is called to assume its proper responsibility with complete awareness.

4. Statistics indicate that it is the generation of youth which is most stricken by AIDS. This threat which hovers over the younger generations should alert everyone to personal commitment because, humanly speaking, the future of the world depends upon the future of its youth, and experience teaches that *the only way to foresee the future is to prepare it in the present*.

The threatening spread of AIDS hurls at all men a *double-edged challenge* which the Church also wants to meet in fulfilling her due share: I am referring to the *prevention of the disease* and to the *health care offered to those who suffer from it.* Truly effective action in these two areas cannot be developed without looking to sustain a common ef-

fort which results from a constructive vision of the dignity of the human person and his transcendent destiny.

The peculiar factors which have given rise to AIDS and its global extension, and also a certain way of engaging the battle against this disease reveal — as so appropriately the general theme of the Conference reminds us — a worrisome crisis of values. Certainly not far from the truth is the affirmation that, parallel to the spread of AIDS, there is a kind of immunodeficiency in existential values that cannot but be identified as a real pathology of the spirit.

5. AIDS prevention — to be *worthy of the human person* and at the same time truly effective — must propose two objectives: *to inform* adequately and *to educate* for responsible maturity.

The information, diffused in so many different centers, must above all be correct and complete, beyond unfounded fears as also beyond false hopes. Personal human dignity demands that each person be helped to grow in affective maturity by means of a specific educational process. Only with information and education which lead to a transparent and joyous rediscovery of *the spiritual value of self-giving love as the fundamental meaning of existence,* will adolescents and youth be able to find sufficient strength to surmount high risk behavior. Education for living one's own sexuality in a serious and serene way and preparation for responsible and faithful love are essential aspects of this way towards full personal maturity. Prevention methods which instead promote egoistic interests, deriving from considerations that are incompatible with the fundamental values of life and love, can only end up being contradictory as well as illicit, merely circling the problem without resolving it at its roots.

For this reason, the Church, sure interpreter of the Law of God and " expert in humanity, " is concerned not only with stating a series of " no's " to particular behavior patterns, but above all with proposing a *completely meaningful lifestyle for the person.* She marks out with vigor and joy *a positive ideal* in whose perspective moral behavior codes are understood and lived.

In the light of such an ideal, it is extremely harmful to the dignity of the person, and therefore it is morally illicit, to support as AIDS prevention any method which violates the authentically human sense of sexuality, and is a palliative for those deep needs which involve the responsibility of individuals and of society: and right reason cannot admit that the fragility of the human condition — instead of being the motive for greater care — be used as a pretext for yielding to a way of moral degradation.

6. Secondly, if prevention be understood in the constructive sense of the term as leading to the retrieval of the full meaning of life and the exalting fascination of generous dedication, it can only be to the advantage of *a greater and vaster commitment to assist AIDS patients,* above all among the younger generations. Those who suffer from AIDS, even in their unique pathology, are entitled to receive adequate health care, respectful comprehension and complete solidarity, just like every other ailing person.

The Church, imitating her Divine Founder and Teacher, has always deemed as fundamental to her mission assistance to those who are suffering. She now feels that she is called upon as protagonist in this new area of human suffering, aware as she is that suffering man is a " special way " of her teaching and her ministry.

Consequently, *many Bishops' Conferences* in different parts of the world have published documents, issuing concrete directives to initiate, improve and intensify the pastoral approach of hope in the action taken to prevent AIDS and in the health care offered to those stricken by it, at times even opening specialized AIDS care centers.

In the spirit of communion, and with confident and intense participation in the sentiment of the whole Church, I willingly take this opportunity to unite my voice to those of the other Bishops, and exhort each and every one to assume his personal responsibilities.

7. Above all, I turn with grievous immediacy *to those who suffer from AIDS.*

Brothers in Christ, who know the bitter harshness of the Way of the Cross, *do not feel that you are alone. The Church* is with you as sacrament of salvation, to sustain you on your difficult path. She receives much when you live out your suffering with faith; she is beside you with the comfort of active solidarity in her members so that you never lose hope. Remember how Jesus invites you: " - Come to Me all of you who labor and are overburdened, and I will give you complete rest. " (Mt 11:28).

At your side, my dear ones, are the men of science who are untiringly struggling to subdue and contain this serious disease; and with you are all those who with generous voluntary dedication or with diligent professionality sustained by the ideal of human solidarity, wish to accompany you with every kind of attention and care. But you can offer on your part something which is so important to the community to which you belong. For the effort to give meaning to your suffering is a precious call back to the highest of life's values, which touches all men, and a particular help which may even be definitive for those who are tempted by despair.

Every day the prayer of the Church is offered

to Our Lord for you, especially for those of you who undergo the illness in abandonment and solitude, for the orphans, for those who are weakest and poorest; those whom the Lord teaches are considered as first in His Kingdom.

8. I now turn *to the families*: In the family nucleus is children's *first school of life* and of formation in life's responsibility in all its aspects, including those related to sexuality.

Parents, you can carry out the first and most effective program of prevention by providing your children with correct information, and preparing them for responsible choice of proper behaviour, both individually and socially.

As for those families who are living from within the drama of AIDS, I want them to feel the special understanding of the Pope, who is so very aware of the difficult mission to which they are called. I pray to Our Lord that He grant them the generosity they need to be able to continue to the end their mission, which, before God and society, they have assumed as undeniable. The loss of family warmth and concern causes in AIDS sufferers the diminishment and even complete loss of that *psychological and spiritual state of immunity* which at times is as important as physical immunity in sustaining the individual's capacity for reaction. Especially those families born under the sign of Christian matrimony have the mission to offer a courageous witness of faith and love; not abandoning their dear one, but rather caring for him, they should surround him with attentive care and affectionate presence.

9. *To teachers and educators*: I appeal to you to become promoters in close contact with the families, of suitable and serious formation of adolescents and youth. Especially in Catholic schools, prepare an organic programing of health education in which preventive measures are in harmony with moral values in the development and formation of a just and authentic lifestyle, fundamental guarantee of the protection of one's own health and that of others.

Educators, to you has been confided the responsibility to guide the young generations towards an authentic culture of love, offering in yourselves guidance and a model of faithfulness to the ideal values which give meaning to life.

10. *To the youth* of every age and social state, I say: Make your thirst of life and love be that thirst of life which is *worth living*, of a life of *constructive* love. The necessary prevention against the AIDS threat is not to be found in fear, but rather in the conscious choice of a healthy, free and responsible lifestyle. Avoid types of behavior which are marked by dissipation, by indifference, by egoism. Be, instead, *protagonists in the construction of a just social order* upon which the world of your future will depend.

With generosity and creative imagination, practice ever new forms of solidarity. Reject every kind of marginalization; stand by those less fortunate than you, assist those who are suffering, while you develop the virtues of friendship and understanding, rejecting all forms of violence towards yourselves and towards others. May your strength be hope, and your ideal, the universal assertion of love.

11. *To those who govern and those responsible for social well-being*: I make an urgent appeal to address in every way the new problems posed by the spread of AIDS. The actual and foreseeable proportions of this disease, as also its close ties with certain behavior patterns which weigh heavily upon interpersonal and social relations, demand that the Nations assume all their responsibility with timeliness and courage, with clear ideas and upright initiatives. In particular, the health and social authorities have the jurisdiction to determine and execute *a world-wide plan for the fight against AIDS and drug addiction*; within this programming, there should be recognition, coordination and maintenance of all just initiatives developed by private citizens, groups, associations and organizations for prevention, treatment and rehabilitation.

Likewise, the struggle against AIDS calls for *collaboration among all peoples*. And because the demand for health and for life is the common denominator of all men, may no political or economic interest divide the commitment of the Nations which, united, are called to respond to the challenge of AIDS.

12. *To scientists and researchers*, with praise for their commendable efforts, I extend my invitation to intensify and coordinate their labors, source of hope for AIDS sufferers and for all of Humanity. As already stated: " It would be illusory to claim ethical neutrality in scientific research and its applications.... Therefore, to maintain their own intrinsic significance, science and technology require *unconditioned respect for the fundamental criteria of morality*: they must be at the service of the human person, of his unalienable rights, and of his true and integral well-being, according to the project and will of God ". (Instruction Donun Vitae, n. 2)

As yet, there is still no vaccine, nor is there any effective medicine against the AIDS virus. May scientific and pharmaceutical research discover the hoped-for remedy. For Mankind is imploring your competence and your sensitivity, distinguished scientists and researchers; it awaits your response in

favor of life, above all, as fruit of your collaboration and dedication.

13. During this interval in which we await the definitive discovery, I invite the *physicians and all health care workers* involved in this delicate professional sector, to transform your service *into witness of helping love*. As I said in Phoenix, U.S.A., to the members of the Catholic Health Care Organizations, " You, both individually and collectively, are the living expression of the Parable of the Good Samaritan " (*Teachings*, X,3, 1987, p.506). Therefore, may your diligence be free of any discrimination! Be capable of receiving, understanding and valuing the confidence which your ailing brother has in you. Always seek, through caring and with discretion and love, to draw closer to that mysterious and so human psychic and spiritual sphere of the patient, from which living and healing energy may flow that will help the sick person to discover, even in his condition, the meaning of his life and the meaning of his suffering.

And you who are *volunteer* health care workers, who in ever-greater numbers devote competence and availability to AIDS victims or are engaged in the work of preventive education, join and coordinate your efforts, update your training, promote activities outside as well to increase community awareness of the problems linked to the reality and threat of AIDS. Be spokesmen for the anxieties, needs, and expectations of those you are assisting.

14. *To our brothers in the priesthood and to our brothers and sisters consecrated in religious life.* First of all to those of you who are specifically dedicated to pastoral health care, my most fervent call that you be *heralds of the Gospel of Suffering* in this contemporary world. The Church's history in health care abounds in heroic personages: priests, religious brothers and sisters who in their compassionate assistance to the suffering have exalted the doctrine and the reality of Love.

Your action, my dear brothers and sisters, to be truly credible and effective, should always be sustained by faith and nourished by prayer. You, who have embraced Christ as the only ideal of your lives, are called to be Jesus' presence in the world: Jesus, Physician of souls and bodies. May those who receive your care perceive through your actions the presence of Jesus, and the tender, maternal presence of the Blessed Virgin Mary.

Listen generously to the call of your Bishops; love and give preference to assist the sick; act under the sign of self-denial and of love, so that " the Cross of Christ may not be made pointless " (1 Co 1:17). Draw close to those who are the least, the most abandoned of our brothers. Be hospitable, promote and sustain all the initiatives which, in serving the suffering, exalt the greatness and the dignity of the human person and his eternal destiny. Be witnesses to the Church's love for all those who are suffering, and of her preference for those most tried by evil.

15. Lastly, I invite *all the faithful* to offer their prayer to the Lord of life to help humanity to gain something also from this new, threatening calamity. May God enlighten believers as to the true and ultimate reason for existence in such a way that always and everywhere they might be messengers of undying hope. May contemporary man know how to repeat the words of Job to the Lord: " I know that You are all-powerful; what You conceive, You can perform " (Jb 42:2). If today, in the face of the impending plague of AIDS, we are still looking for an effective cure, we trust that with the help of God life will finally triumph over death and joy over suffering.

With this wish, I invoke the blessing of Almighty God upon you and all those who spend their energies at the service of this most noble cause for which you have come together at this Conference.



PROFESSOR G. B. MARINI BETTOLO

Tribute to the Holy Father

Holy Father, in the name of all the participants in this International Conference, I am extremely happy to express our deeply felt gratitude that you are here amongst us, once again, as we gather to study what is, in the field of health, one of the most serious and urgent problems of our time.

In calling this fourth International Conference, the Pontifical Council for Pastoral Assistance to Health Care Workers, so wisely and courageously chaired by His Excellency Monsignor Fiorenzo Angelini, has sought, above all else, to give expression, Holy Father, to the paternal solicitude with which you have often called upon the resources of science and the solidarity-inspired commitment of all men of good will to come together and to confront, both by suitable prevention and by the speeding up of the processes of research, the growing menace of the acquired immuno-deficiency syndrome, known by the acronym AIDS.

The organisers of this fourth International Conference, specifically giving expression to an ever constructive approach of the Church towards the fight against the gravest disasters, and in bringing together themes and problems associated with the question 'To Live: Why?' which will be considered during the course of this scientific assembly, have sought to give prominence to two tasks. Firstly, that of studying the pathological implications of this new disease, not only at a physical level, but also at a mental, moral and spiritual level. Secondly, that of restating the urgency of fighting AIDS through the common effort of scientists, researchers, doctors, health care workers, and whoever, by vocation, mission or profession, has to contribute to the care, treatment, and recovery of those who are ill with AIDS.



The Pontifical Council for Pastoral Assistance to Health Care Workers, in promoting this conference, intends to make the most of that collaboration, for which, by reason of its founding purpose, it wants to be a constant stimulus. The Pontifical Academy of Sciences, which I have the honour to be president of and to represent, wants to follow this course, as do the other ecclesiastical bodies of both the Roman Curia and of the different Churches in every part of the world.

The complicated structure of this International Conference, the fact that it is open to all scientific contributions, its attention to the numerous medical, health, moral and social problems connected with the prevention of, and fight against, AIDS, not to mention care for those many who are afflicted by AIDS or run the serious risk of being so, confirm, Holy Father, our common will to confront this grave problem in all its causes, whether they are of a biological or an ethical and social character.

We want this to be, Holy Father, a further confirmation of our will to combine scientific duty with coherent Christian witness, something which is all the more necessary and urgent because it is called upon to express itself in the name of human solidarity, that is to say, with the fullness of service and love for our brothers, and most especially for those who suffer.

All of us, Holy Father, and with us so many brothers who suffer in every part of the world, await your inspired words of comfort and of illuminated guidance.

H.E. Prof. GIOVANNI BATTISTA MARINI BETTOLO
President of the Pontifical Academy of Sciences

Patient's Words of Thanks to the Holy Father

Holy Father!

I speak on behalf of a group of friends of the Family-Home ' PADRE MONTI ' of the Sons of the Immaculate Conception, in Rome, and for all victims of AIDS.

We would like to express our sincere gratitude for the care and attention which you have dedicated to this need, in all parts of the world, and in Rome as well, where structures have been established to house those of us who, because of this illness, have become homeless.

Our life in the Family-Home is relatively serene, and we are witnesses to this, because we live in fraternity among us and with the health care workers who are with us.

According to the theme of the Conference: TO LIVE: WHY?, we also affirm that we want to live because with the help of man and of God, we are confident that we will soon be able to leave this frightening tunnel of death.

We want to live because with this illness, and because of this illness, we have discovered along with so many other things that those around us have so much goodness, and that a clean and peaceful life gives happiness.

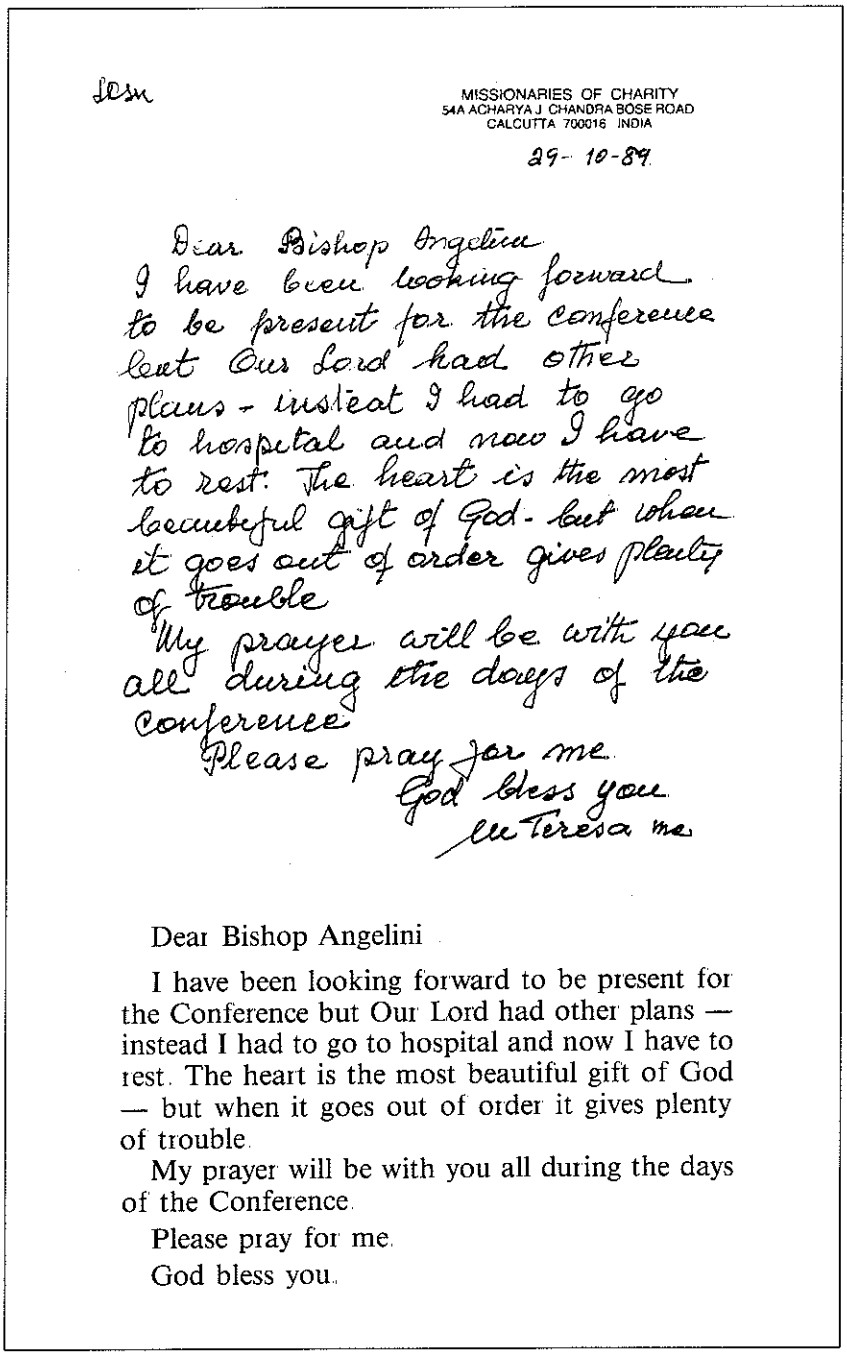
May your blessing, Holy Father, keep our hope alive, hope in our future; and may it enlighten the minds of scientists so that they might soon give that 'good news' the world is waiting for: we have found the weapon by which to subdue the calamity of our age!

The GUESTS
of the PADRE MONTI FAMILY-HOME
Rome



MOTHER TERESA OF CALCUTTA

My Prayer Will Accompany You



JDSm

MISSIONARIES OF CHARITY
54A ACHARYA J. CHANDRA BOSE ROAD
CALCUTTA 700016 INDIA

29-10-89

Dear Bishop Angelini
I have been looking forward to be present for the conference but Our Lord had other plans - instead I had to go to hospital and now I have to rest. The heart is the most beautiful gift of God - but when it goes out of order gives plenty of trouble
My prayer will be with you all during the days of the conference
Please pray for me.
God bless you.
M. Teresa mc

Dear Bishop Angelini

I have been looking forward to be present for the Conference but Our Lord had other plans — instead I had to go to hospital and now I have to rest. The heart is the most beautiful gift of God — but when it goes out of order it gives plenty of trouble.

My prayer will be with you all during the days of the Conference.

Please pray for me.

God bless you.

✠ *FIORENZO ANGELINI*

Introduction to the Conference Sessions

Once again, the International Conference organized by the Pontifical Council for Pastoral Assistance to Health Care Workers, in this fourth convocation, treats one of the most complex and pressing problems of our day. In fact, the growing threat of AIDS poses so many questions, among which emerges the living drama which is indeed the question that frames this important encounter of study and dialogue: TO LIVE: WHY?

The problem of AIDS above all calls upon science, but not exclusively so. The present state of facts and knowledge offers two important elements for our consideration: on the one hand, notwithstanding the great and promising results achieved, science is not yet able to provide the means by which to subdue this serious disease; on the other, an empirical link has been established between the rise and development of this disease and human behavior patterns which are conditioned not only by a serious crisis of values but also by the persisting scandal of social injustice.

Both science and the cultural, political and religious forces summoned to unite in the struggle for AIDS prevention and for adequate care of AIDS patients intuit the need to begin from some ethical presuppositions which lead to the existential problem of the meaning of human life. Science and ethics cannot limit themselves to a purely passive stance of defence; as the eminent scientists and researchers participating in this scientific encounter will illustrate, success depends also upon the launching of an effort capable of getting to the very roots of this threatening calamity.

Talks and papers will treat the entire complex and differentiated problems related to AIDS: the present status of the epidemic, its causes, its diagnosis, immunological concerns, therapy, prevention, psychological and neuropsychological aspects, family and social implications, information services, involvement of public and private institutions, solidarity, the pastoral approach, legislative and wider care-related aspects, long and short term goals in program implementation.

The Pontifical Council's primary intention and aim in promoting this International Conference, is to offer a new contribution to the present state of research and considerations on AIDS.

For this reason, I am grateful, first of all, to the distinguished scientists who are present and who will offer information, working hypotheses, suggestions and proposals designed to increase the hope of those who are living in anguished expectation. However, the problem is so arduous and so complex that the Church is concerned about the initiatives taken, above all for collective prevention of the further spread of AIDS, that they not be so short-sighted as to propose insufficient and inadequate solutions.

The commitment of science must be matched with conscience- formation, so that the young generations, who are especially exposed to the danger of this new contagion, might so orient their own actions as to sustain a more valid and efficacious preventive campaign. At the same time, however, the Church is greatly concerned that marginalization of AIDS patients, whether open or disguised, be avoided in every way by both science and the political and social institutions. For these, just as every other suffering human being, have the right to total solidarity, to suitable health care and generous support.

AIDS demands a response of life; it awaits a word of hope which helps one to live, and gives meaning even to suffering. Let us all, then, all of us and all of you who are participating in this International Conference, let us all together contribute to this response of hope and of life.

✠ FIORENZO ANGELINI
President of the
Pontifical Council for Pastoral
Assistance to Health Care Workers

CARDINAL JOHN JOSEPH O'CONNOR

Aids: Science and Conscience

One of the most distressing developments I have seen in relation to the tragedy of AIDS is the development of so-called " support groups " to help persons with AIDS kill themselves. The reason given, of course, is that their " quality of life " is perceived as having deteriorated to the degree that " life is not worth living. "

What is behind this frightening situation? Many variables, of course, but for our purposes here I will focus on three: skewed interpretations of the concept, " quality of life "; cure of AIDS perceived exclusively in physiological terms; reductionist understanding of the purpose of life. Let us reflect on each of these three variables.

First: Quality of Life

This is a noble-sounding term. I remember when it began becoming popular in my own country in the 1970's. We were becoming more sensitive to poverty, racism, homelessness, bad housing, illiteracy, and so on. Those of us who " had " were reminded of our obligation to those who " had not. " It all seemed very noble.

Unfortunately, the overwhelming emphasis was on the purely material, on the temporalities of life. It was assumed that better housing, higher incomes, better access to health care, and so on, would automatically improve the " quality of life. " We never defined what we meant by either " quality " or " life. " What constitutes the " good life "? What constitutes the " better life "? Who can determine this but God alone? " Not by bread alone does man live, " says the Lord (*Mt* 4:4).

In addition to our failure to define " quality of life, " there was our failure to ask *why* we wanted to improve the quality of life. In attempting to examine this latter question on my own, I am convinced that our primary reasons were pragmatic, utilitarian, and rooted in an illusion of social evolution. Let me explain very briefly what I mean, because I believe the question of motivation for wanting to improve the quality of life is both relevant to the problems of persons with AIDS and a serious impediment to providing proper support to persons with AIDS.

Three intertwined philosophies have marke the current century in the western world: Utilitarianism, Pragmatism, and Social Evolution. You will forgive my defining them with excessive simplicity in the interest of time. *Utilitarianism*: that is " moral " which brings the greatest happiness to the greatest number. *Pragmatism*: if it works it is morally good. *Social Evolution*: morality is an evolving thing. Just as in theories of physical evolution we have the notion of the " survival of the fittest, " so in social evolution that is morally good which survives because it is most fit for the times.

Obviously, each of these is a philosophy of moral relativism, essentially hostile to any moral absolutes, and to the notion of the intrinsic worth and dignity of every human person, or to the concept that every human person is sacred because made in the Image and Likeness of God.

Indeed, in my judgment, the most common usage of the term " quality of life " is rooted in these three moral philosophies. In is largely these philosophies that generated the notion of " the life that is not worth living. " If it is not materially productive, therefore not pragmatically useful, it is a " life not worth living. " If they do not demonstrably contribute to " the greatest happiness of the greatest number, " persons' lives are " not worth living, " If they are not able to compete in the marked place, not capable of surviving on their own, without the help of society at large, their lives are " not worth living. "

I would like to illustrate the impact of these philosophies by way of two references to my own country, and one to a movement that originated in Europe.

The most famous Supreme Court Justice in the history of the United States was Justice Oliver

Wendell Holmes. Justice Holmes was a pure moral relativist, a perfect product and exemplar of pragmatism, utilitarianism, and social evolution. His philosophy of law and society itself was rooted in sheer expediency. I quote his opinion on the sterilization of " imbeciles, " issued from the bench of the Supreme Court of the United States (*Buck v. Bell*, 1927).

" We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the state for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility,

You have to be asking at this point what all this has to do with persons with AIDS. Forgive me for just another few minutes, then I will attempt to show the application ... and the danger.

Dr. Leo Alexander, was an official medical expert at the Nuremburg trial of German physician-executioners of Nazi medical atrocities. As the editor of the prestigious *New England Journal of Medicine* put it: «The experience impelled him to record the insidious progression of corrosive medical thinking ....». I quote from Dr. Alexander's report.

" Whatever proportions these crimes finally assumed, it became evident to all who investigated them that they had started from small beginnings. The beginnings at first were merely a subtle shift in emphasis on the basic attitude of physicians. It started with the acceptance of the attitude, basic



society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains vaccination is broad enough to cover cutting the Fallopian tubes. ... Three generations of imbeciles is enough. "

The kind of horror that followed this kind of Supreme Court thinking became clear in 1961, when the Attorney General of the State of Oregon listed persons who could be compulsorily sterilized. They included:

Feeble-minded, insane, epileptic, habitual criminals, incurable syphilitics, moral degenerates or sexual perverts, who are, or, in the opinion of the institution heads, are likely to become menaces to society ... [and] persons convicted of committing or attempting to commit the crimes of sodomy ... or ... an act of sustained osculatory relations with the private parts of any person, or permitting such relations.

in the euthanasia movement, that there is such a thing as life not worthy to be lived. " (241: 39-47, 1949).

Dr. Alexander goes on to assert that this " entire trend of mind received its impetus " from " the nonrehabilitable sick. "

I turn now to the question of attitudes toward persons with AIDS and the care and treatment of such persons, and I want to say something that may prove very unpopular, and open me to the charge of using " scare tactics. " Nonetheless, I must, in conscience, suggest to you my grave fear that the day will come when only a select number of persons with AIDS will be given the treatment and care they need, and many will be denied help altogether, because of the great numbers. It has been estimated, for example, that by 1991, the costs of treating AIDS in the City of New York alone will be 4.5 *million* American dollars every single day. Where will

money like that come from? Where will medicines and health care workers, hospital beds or other health care facilities come from? They are nowhere in sight on this 13th day of November in 1989. Yet we are talking about an estimated phenomenon less than two years away!

What will be the temptation (and I know it is unpopular to ask)? The temptation will be to concentrate on acute care patients, doing whatever can be done for them, applying whatever medications may possibly help, even, perhaps, those medications still in experimental stages. Not the only motivations, but a dominant one for this will be purely pragmatic: untended persons with AIDS in the acute stage will be perceived as hazards to the health of the general public. Obviously, many fine health care workers will want to take care of these persons for





the same reasons they take care of cancer patients, or any other persons who are acutely ill, not for pragmatic, but for humanitarian purposes. It is their profession and their vocation, and they are totally dedicated to it.

But what of those who have not yet entered, or worse, have already passed through an acute phase, and are discharged from hospitals? I fear it will be a matter of survival of the fittest. I see it already. What happens even now to persons with AIDS discharged from hospitals? Most are hopelessly weak, can't work for a living, may not be able to feed, medicate or otherwise care for themselves. Many have nowhere to go but to the streets, where, if they have previously been drug users, they fall back on drugs, once again.

Then there are those who are in prison, and have AIDS. I don't know of any group more frequently treated with contempt. They are perceived not only as useless to society, but a completely unjustifiable burden for society. There is more than one horror story of a prisoner's being thrown into a solitary cell and left to die.

I worry, as well, about the increasing prevalence of infants with AIDS. Given the abortion mentality that prevails throughout the world and the growing use of amniocentesis and other prenatal exploratory procedures, what will be the temptation automatically to induce abortions of unborn babies who are HIV-positive? Indeed, what will be the temptation to destroy them even after they are born?

I don't believe these various realities and possibilities are simply a function of the *numbers* of persons with AIDS. They are largely attributable to the unspoken belief that the lives of such persons aren't worth living. They are no longer " productive " on society's terms (or, if unborn, will not be " productive " when brought into the world). Their " quality of life " has deteriorated to the point that their lives are " not worth prolonging. " Why have we not, in my own country, really bothered to build nursing homes, hospices, " respices, " step-down units for persons with AIDS no longer eligible for acute care in hospitals? Why have we done virtually nothing to develop and train a cadre of home-health care visitors for people with AIDS?

When I was a member of President Reagan's Commission on AIDS, I had to plead constantly (if largely unsuccessfully) that such opportunities be made available.

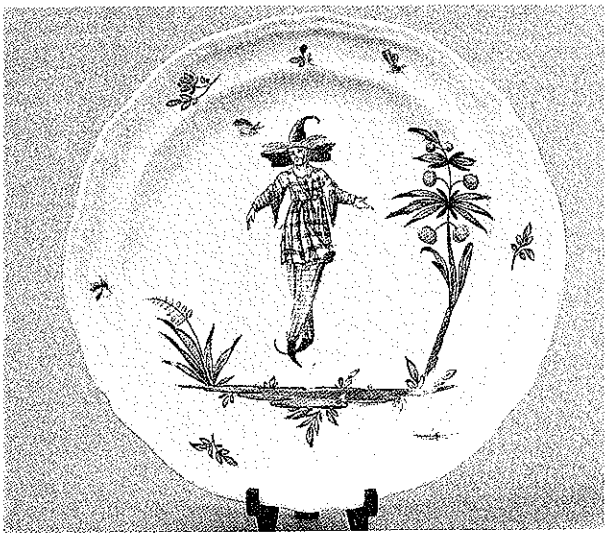
Add another frightening element: the growth of acceptability of " euthanasia " in the world. Many

sick and elderly and helpless patients today are led to believe that they actually have an *obligation* to their families or to society to terminate the burden they represent by terminating their own lives. More and more states are moving toward " right to die " legislation, and even the right of a hospital to refuse to remove nutrition and hydration is not only being challenged, but even overruled. One begins to see DNR notations on patients records more and more frequently.

Is there any wonder that in such a climate suicide " support " groups would begin springing up, to help *persons* with AIDS kill themselves?

In my judgment, we will not mend this climate until we mend our notion of the human person. The human person does not exist for society. Society exists because of the human person, of inestimable





worth and dignity, sacred, made in the Image and Likeness of God.

In a conference of this nature, a speaker is expected to be practical, and not simply to theorize, or even to inspire and exhort. Believe me, I am being utterly practical when I aver that we will not take persons with AIDS seriously until we look at every single one of them as sacred. Oh, we will take *AIDS* — the disease itself — seriously, if for no other reason than out of fear. It is amazing that panic has not set in already. I believe this is so in part because of widespread ignorance or uncertainty about the dimensions and spread of the disease, and in part because of the phenomenon of denial that frequently characterizes a response to a threat so overwhelming we simply cannot acknowledge its reality. But whatever societies at large or governments do, scientists will unquestionably stalk this disease unrelentingly, and, please God, will one day overcome it.

That kind of massive effort, however, is focused on the *disease*, not on *persons* with the disease. I am not faulting scientific research. I am simply arguing that it will proceed at its own pace because it must, or the disease could destroy us. The research effort, *per se*, however, does not necessarily address the nature of the human person. But the *application* of the work of the research scientist is a different matter. That will depend on what governments and societies and, specifically, health care workers believe about the human person.

A now deceased American political scientist, Harold Lasswell, defined politics as " Who Gets What, When, How. " Professor Lasswell observes that societies invest their resources in those values in which they really believe. It is obvious, then: what we believe about human persons with AIDS will determine how we invest our resources.

Second: The Notion of " Cure "

I cite above as a serious threat to persons with AIDS that the notion of a " cure " is badly skewed in western society at large, and in health care in particular. What do I mean?

I believe that we become so completely caught up in the physiological, or physically pathological, or medical aspects of AIDS that we can tend to forget that the human person is both body and soul. Rarely do we became only *physically* ill. Body impacts on mind, mind on body. That equation is beyond dispute.

When we speak of a " cure " for AIDS, however—or even worse, when we say that currently we have no " cure " for AIDS—we are obviously talking exclusively about the physical impact of the retrovirus on the human *body*. We have little research that I know of concerning what AIDS does to the mind, the emotion, the soul. But research or no research, I believe that a tremendous amount can be done to help " cure " persons with AIDS mentally, emotionally, and spiritually.

Despite having spent a year on President Reagan's *Commission on AIDS*, and after listening to some 600 witnesses, most of them outstanding scientists, I pretend to very little medical or scientific knowledge about AIDS. However, I have sat with, listened to, emptied the bedpans of, washed the sores of more than 1,100 persons with AIDS. In my

I cannot tell you the number of persons with AIDS I have spoken with, now in our care, who have come to us from other health care facilities, and who tell me that the difference in our facilities is that we obviously care about them as *persons*.

A few years ago, I asked Mother Theresa of Calcutta to open a very small residence for persons with AIDS with no place to go. She did, and staffed it with her Missionary Sisters of Charity. It is called Gift of Love. I suspect that everyone who dies there — and many of its residents do — goes straight to heaven. For the first time in their lives many of them experience love. Someone loves them for *themselves*, not for their money, their talents, their sexual capabilities, or any other extrinsic factor, but for themselves. In feeling loved, they *learn* to love, again many for the first time. It is not long



Archdiocese of New York I have 18 Catholic hospitals, 10 nursing homes and a Medical College. Virtually all of our hospitals and some of our nursing homes have a very significant number of beds designated for persons with AIDS. One hospital, St. Clare's, took the lead in appealing to City and State to turn over to its care prisoners with AIDS.

What do we do in our hospitals and other health care facilities? Of course, we try to practice the state of the art medically. Of *course*, we try to keep up with the field, and to administer the most effective pharmacological therapies available. We know we have a grave moral responsibility to be technologically professional. I suggest to you, however, the most powerful medicine administered to persons with AIDS in our Catholic health care facilities is the medicine of *love*. We treat persons with AIDS as *persons* - sacred, made in God's Image and Likeness.

before they come to realize that the love the sisters have for them is God's love. In turn, they fall in love with God, and in His love they die. That's not a " cure "?

A great joy for me, personally, is to help persons with AIDS to stop hating themselves, especially those who don't admit that they do hate themselves. I am happy, too, when I can get them to face the hidden sense of guilt that eats at them as a cancer, to drop their defiance, their resentment of the world. In my judgment, that's a " cure " at least as important as curing Kaposi's sarcoma.

There are other " cures " many people don't dream of. I want to tell you of a 23-year-old girl whom I will call Therese.

What kind of person she was before I first met her, when she was in a state of dementia, I don't know. Her memory was virtually gone, her ability to reason severely reduced. While much of the time

she simply stared beyond space, she could be startled into acute anxiety. Yet I came to look forward to my visits to Therese, which were often late at night, when I could talk to her, whether or not she answered.

The fact was that for my first three visits in a row, she didn't answer at all, yet I believe deeply that she was hearing me. She had a small, pale, pretty face, with beautiful skin, always scrubbed gently but scrupulously clean by nurses or attendants. I would stroke her forehead and literally *feel* her anxiety lessen, even though she replied to none of my comments.

It was when I walked into her room during my third week of visits that she looked at me directly and said: " You're the cardinal. " Were those words worth a million dollars to me? They were priceless, as was the very real, two-way conversation that followed.

Then came the day that Therese wanted to tell me something of her life before AIDS; and I knew that she knew we had become friends.

Therese never knew I had her under the protection of Saint Therese of the Child Jesus, the Little Flower, who died on a bed of excruciating pain. I knew it wouldn't matter to Saint Therese that my friend had contracted AIDS. It would be enough that she suffered, and that in her suffering she became a little child.

One of the most wonderful " cures " of all is to help persons with AIDS and their families come to a reconciliation. Often there is so much bitterness and resentment on the part of a family against a family member who contracts AIDS. The person with AIDS can be equally bitter and resentful that the family has rejected him or her because of " lifestyle. " Now death is months or weeks or hours away. Such peace there can be in reconciliation.

I could speak of many other types of mental, emotional, moral, or spiritual " cures. " There shouldn't be a need. I have introduced the concept as a reminder that a person with AIDS is more than a body that is terminally ill, and with no hope of " cure. " Health care workers can do so very much to help effect such " cures. " This is not simply the responsibility or opportunity of the chaplain, or pastoral minister. Every doctor, nurse, nurse's aid, volunteer, staff person, sweeper, bedpan emptier, every visitor can help effect a " cure " that will last into eternity, and at the least, help persons with AIDS live out their dwindling lives with a sense of dignity, and die in peace.



Third: Reductionist Understanding of the Purpose of Life

This brings me to the third and final variable I cited above as detrimental to persons with AIDS: for health care providers to underestimate the purpose of life.

The world seemed much less complicated when I was a child. The teaching of the Catholic Church was straightforward and unambiguous, as it should always be. I accepted without question a fundamental truth taught me by my parents, our priests and the religious sisters. It was given us in answer to the question: " Why did God make me? " As clearly as a bell came the answer: " God made me to know Him, to love Him, to serve Him in this life, and to be happy with Him forever in heaven. "

Nothing I have ever learned since has been more important. It gave meaning to my life instantly,

shaped and formed everything I think and do. It has never made life easier; it has, far more importantly, made life meaningful. I have known all my years that life is a pilgrimage. Every pilgrim wearies, slips, falls. Every pilgrim is subject to the elements, gentle and fierce. Every pilgrim is buffeted by winds, parched by thirst, famished by hunger. The road may seem to go on forever, but the pilgrim perseveres because he knows where he is going. He has a goal. Reaching that has become his only purpose in life. It sustains him at every moment, through every trial.

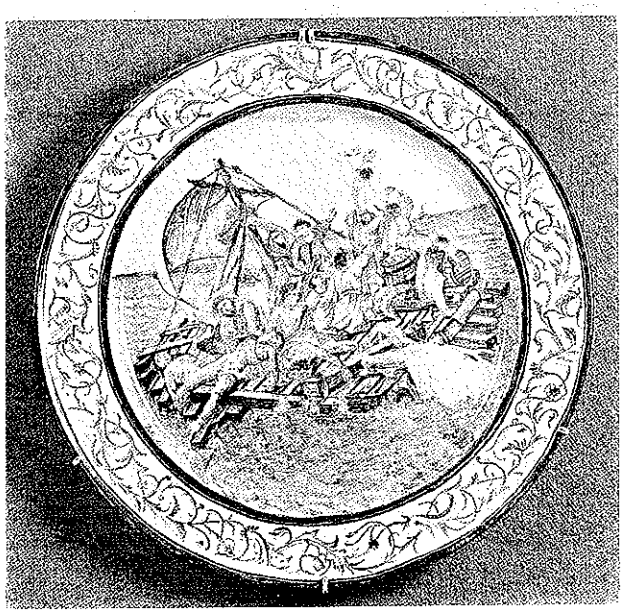
Few of those who have acquired AIDS through sexual activity or drug abuse, in my experience, had thought seriously of life as a pilgrimage to prepare us for ultimate union with God. I'm not indicting them, I'm simply observing that they haven't given much thought to what I believe is the essential purpose of life, prior to acquiring AIDS. They either didn't believe in a next world, had blocked it out of their consciousness, or had decided it had little to do with our activities in *this* world.

Many, too, prior to learning they have AIDS, have had to try desperately to convince themselves they were happy, precisely as they have tried to convince the world. Deep within, they may have been frighteningly lonely, felt totally alienated, wondered who they really are — even *if* they are.

AIDS is a radically disillusioning disease. No matter how the person with AIDS tries to mask it, through a hard or hostile appearance, or through false bravado and contempt for the world, everything he had built his life on is shattered. There are no more illusions, even for those who try to hang on to the belief that while AIDS has spelled death for thousands, it can't happen to them.

My dear health care professionals, I believe we have a grave obligation to be honest with persons with AIDS. We cannot cheat them or deprive them of their right to the truth. The truth is not in condoms or clean needles. These are lies—lies perpetrated often for political reasons on the part of public officials, including public health authorities, whose political future depends on their controlling the spread of AIDS. They are lies told even by some health care professionals who believe they have nothing else to offer persons with AIDS or at risk. They are lies told by often well-meaning counselors, who have become confused about moral values, and believe that the end justifies the means.

The truth is that for the foreseeable future the overwhelming number of those who contract AIDS are going to die. They are going to die in misery,



wasting away, perhaps covered with sores, possibly in dementia. There is nothing glamorous about their condition.

I believe that you and I have an obligation to help dispel the myth that life in this world is the ultimate purpose for our existence. We must have the courage to be countercultural, to make clear our belief that how we live and what we believe *does* matter. We must not confuse compassion with a pretense that we condone life styles that heighten the risk of contracting AIDS. All through her history, the Catholic Church has distinguished clearly between sin and the sinner, rejecting the sin, embracing the sinner.

Categorically, *no one* must be denied either medical care or sincere welcome, understanding and compassion. I, for one, however, cannot believe it is good medicine to ignore future behavior which can only exacerbate an individual's problems. Nor do I consider it good medicine for health care pro-

fessionals to remain silent and passive about social conduct.

No matter how much we want to refrain from stigmatizing persons with AIDS, we know the cold, hard statistics. In my country, it is estimated that on a national basis 72% of persons contracting AIDS do so through homosexual behavior, 17% from IV drug use, the remainder through heterosexual behavior, blood transfusions, or in the pregnancy-birth process. How can health care professionals not discourage behavior that in such a high number of incidents leads to AIDS? We are currently spending or budgeting billions of dollars, designating major portions of our health care facilities, and committing tremendous research and health care efforts to discover preventions or medical cures for AIDS—and so we should. But why do we fear to address the obvious: the behavior that can contribute significantly to the contracting or spread of AIDS?

This behavior must not be addressed in merely negative terms, however, accusing, indicting, condemning. We must offer constructive alternatives. I suggest that the first and most important of these is to try to encourage a more profound understanding of the real meaning and purpose of life. I consider it at least legitimate if not obligatory for health care professionals who believe that God made us to know Him, love Him and serve Him in this life, and to be happy with Him in heaven to transmit this belief to persons with AIDS or at risk. I'm talking about good *medicine*.

The influence of health care professionals can be tremendous. Those medical doctors who have been most outspoken in encouraging abortion will tell you—once they have been converted from their ways—how effective their support for abortion was with legislators, public officials, and women patients. Why must health care professionals refrain from trying to influence people *against* abortion? I regret to say that, in general, many medical doctors in my country have been notorious for their silence on such moral issues as abortion, and the removal of nutrition and hydration, or euthanasia.

I want to talk about this a bit. Sometimes I believe the greatest damage done to persons with AIDS is done by the dishonesty of those health care professionals who refuse to confront the moral dimensions of sexual aberrations or drug abuse. " I'm a doctor, " one will say, for example, " I don't have the luxury to be a moralist. " Or, " I am personally opposed to such behavior, but I can't impose my conscience on others. " (That's a favorite evasive tactic of many public officials in my country).



How can they do that in conscience? How can they compartmentalize themselves? Can one say, for example: " At this moment I am a doctor or a nurse or a research scientist, but when I am away from the office or the hospital or the laboratory, I am a Jew or a Catholic, a Protestant or a Hottentot? " Certainly, in *our* teaching, being a Christian isn't a matter of hanging a cross around one's neck any more than being a doctor is a matter of hanging a stethoscope around one's neck. Good morality is good medicine.

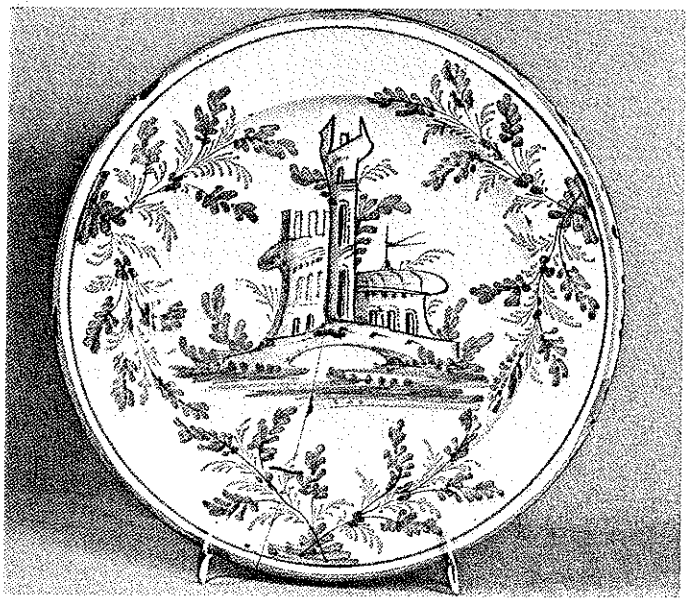
Nor do I believe the statement often heard today that technology has outstripped ethics. That is believed only by those who don't believe in moral absolutes, in immutable moral principles. It is not that technology has outstripped ethics; it is that we give far more thought to technology than to ethics. We move ahead with scientific research, for exam-

ple, without even *asking* its ethical implication.

Scientists and health care practitioners are subject to the same sets of moral laws that bind all peoples everywhere. Science has no conscience. The scientist very definitely *has* a conscience. Scientists and health care professionals, however, must do their best to see that they have properly *formed* consciences. The Second Vatican Council put it well.

" Deep within his conscience man discovers a law which he has not laid upon himself but which he must obey. .... For man has in his heart a law inscribed by God. His dignity lies in observing this law and by it he will be judged " (GS 16).

In fidelity to conscience, Christians are joined with the rest of men in the search for truth, and for the genuine solution to the numerous problems which arise in the life of individuals and from social



relationships. Hence the more that a correct conscience holds sway, the more persons and groups turn aside from blind choice and strive to be guided by objective norms of morality.

Conscience frequently errs from invincible ignorance without losing its dignity. The same cannot be said of a man who cares but little for truth and goodness, or of a conscience which by degrees grows practically sightless as a result of habitual sin " (LG 19).

Finally, I want to reflect on an immensely powerful tool that health care professionals can use to help persons with AIDS—but only if you believe life is a pilgrimage with the goal we have cited above. I refer to the extraordinary potential of suffering. Now I must speak primarily from a Catholic viewpoint.

We believe that it was not Christ's preaching or His teaching that made possible the salvation of the world, nor was it His miracles, spectacular though they were. The salvation of the world became possible through Christ's suffering and death on the Cross. Only when He was pinioned to the Cross, helpless, burning with fever, parched with thirst, quivering with pain—only when He experienced the depth of loneliness and near-despair, with people spitting in His face and ridiculing Him—only then was He saving the world. " If you are the Son of God, " they shrieked at Him, " prove it — save yourself, come down from the Cross. " He did not come down. Had He done so, His life would have been a failure.

Nothing I know of is so comforting as to remind every sufferer that by uniting his suffering with that of Christ on the Cross, his weakness, his helplessness, his loneliness and pain can be enormously powerful. We don't know how it works, but the linkages among all peoples are such, however mysterious, that every pain or disappointment I offer to God in union with Christ on the Cross can somehow do indescribable good. I don't pretend to know how it works, but I believe passionately that someone at this moment in the heart of Australia, let us say, who may be tempted to commit suicide, may well receive the grace to choose life. It does not necessarily make life the slightest bit easier for the person with AIDS, but it can certainly make life more meaningful. I sincerely urge you who work with or for persons with AIDS to encourage them to use, not waste, their suffering. They are not helpless, they are exceedingly powerful. They can do an immense amount of good.

In conclusion, I ask those of you in administrative positions to be exceedingly sensitive to those who work with persons with AIDS on a " hands-on "

basis. I have seen them become victims of the same kind of discrimination that is inflicted on persons with AIDS themselves. Insurance companies can threaten to cut off their insurance policies. Landlords can threaten to evict them. The greatest threat, however, is to their morale. Health care professionals are generally committed to helping people recover medically from their illnesses. More frequently than not they are successful. A far greater percentage of hospital patients recover and leave the hospital than die. With persons with AIDS, the situation is reversed. That takes its toll on those health care workers who have become spiritually and emotionally committed to them, and have tried desperately to help them live. The " burnout " factor is very real. Justice and charity demand that we be sensitive to it.

I conclude now by speaking of the crushing blow the death of a loved one with AIDS can be to a family. Let me tell you of my Christmas Day in 1987.

I never check the religion of the persons with AIDS I visit, nor color, nor sex, nor " lifestyle, " nor the way in which the virus was contracted. I visit *persons*, persons who happen to have AIDS. The sobbing lady standing beside the bed of her son was clearly not Catholic. It was equally clear that her son was dying. I waited, praying. He died.

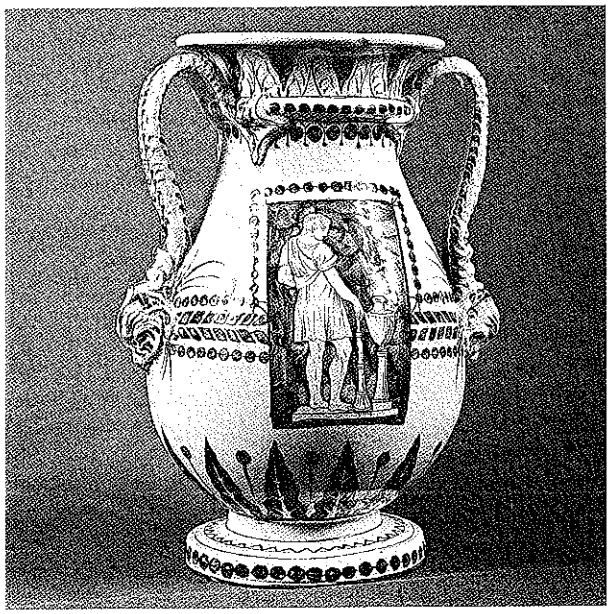
His mother's sobs became convulsive. The sixth sense that comes of years in the presence of suffering and death told me her grief was even greater than the immediate tragedy. I waited. The rest of her family arrived. Than I learned that the twenty-four-year-old son who had just died of AIDS acquired by intravenous drugs was the third in the family to die within the year. A twenty-year-old daughter had been first: drugs. A thirty-four-year-old son had been second. And now the twenty-four-year-old. On Christmas Day.

I completed my rounds, including the locked ward, where prisoners with AIDS had been sent by the state. I tried to be cheery with every patient, especially the prisoners. I smiled and wished Merry Christmases all around while my heart was a lump in my belly. They would all die as the twenty-four-year-old had died, wasted to the bone, burning with fever, almost all desperately lonely, however many people may surround them or love them. I went home. The Magi wouldn't come today. The Christmas Star was a dull glow. The mother of the twenty-and twenty-four and thirty-four-year-old will be my own suffering Pietà for a long time to come.

AIDS won't go away for a long time to come. Before it does, short of divine intervention, it will ravage our society. God alone knows how many people will die, how many will live in a torment of uncertainty, how many families will be shattered, hearts broken, loves lost.

The time has come to thank all of you profoundly for what you do, for what you are trying to do for those who can truly be called the " least " of Christ's brothers and sisters, in the sense in which He used that term. Never forget for a moment His promise, that whatever you do for the least of His brothers and sisters you do for Him. I am deeply grateful to our Holy Father for sponsoring this conference, to Archbishop Angelini for convoking it and for inviting me here to address you, to you for being here. It has been a great privilege for me to be with you.

JOHN Cardinal O'CONNOR
Archbishop of New York
Member of the Pontifical Council
for Pastoral Assistance
to Health Care Workers



CARDINAL PAUL ZOUNGRANA

AIDS: A Pastoral Approach

It is at the request of Archbishop Fiorenzo Angelini, President of the Pontifical Council for Pastoral Assistance to Health Care Workers, that I am speaking before this august Assembly as a Pastor at the service of the population of Sahel to share with you some pastoral reflections regarding the problem of AIDS, which constitutes the agenda for this Fourth International Conference.

I express my gratitude to Archbishop Fiorenzo Angelini, a long-time friend, and to the Office he directs with competence and dedication for having chosen this topic and organized the Fourth International Conference, whose conclusions, I believe and hope, will be of great importance for both States and the Church.

The Church in Africa, and in this instance that of Burkina Faso, greets all the participants in this Conference through the voice of its Pastor. It looks to the assembly in Rome in the expectation of a message of solidarity and hope for a world confronted with the terrible AIDS virus. And it assures you of its constant prayer in the Lord.

It is not from a Catholic Pastor that one should expect technical data related to the AIDS virus and its prevention. That is not, indeed, within his province. His mission consists of reading events in the light of the Word of God and Christian morality to help the faithful and men of good will to conform their lives to the principles and human and spiritual values necessary to the life and survival of man and society.

It is encouraging to observe that on the level of States and international bodies much has been done to sensitize the masses with a view towards protecting them from the AIDS virus. In many countries there already exists a national committee for the fight against AIDS. The mass media have continually informed people of the nature of the virus, on the way it is spread, and on how to prevent it.

The Church's contribution seeks to be pastoral, above all. Through her diverse initiatives, the Church sets her sights on man, called by vocation to become what he is — i.e., a son of God created in God's image and likeness.

There are two problems which I would like to deal with in relation to this subject:
— the dignity of man and Love as the foundation for all authentic prevention;
— some elements responding to certain ethical problems raised by AIDS.

1. The Dignity of Man and Conjugal Love: Two Moral Criteria for Evaluating Prevention

Created in the image of God, man possesses both the capacity and the desire for a life of interpersonal intimacy similar to the intimacy of the Trinitarian life characterized by the Love of the Father for the Son in the Holy Spirit.

It is human love, a reflection of Divine Love, which gives human sexuality its fullness and its final end. Man's sexuality is essentially lived out through a definitive commitment of love open to life. It is realized in the most complete way when *faithfulness* and *commitment* are expressed in love, qualities which are proper to Divine Love.

We thus understand the Church's insistently appealing to society and couples in particular to give love and sexuality their true meaning. Human sexuality, which is a gift of God, must not be expressed genitally except in a monogamous, heterosexual relationship involving permanent faithfulness in marriage.

If we do not take this aspect into account in our prevention of AIDS, we run the risk of not getting to the heart of the AIDS problem, unless we content ourselves with short-term palliatives which in the long run are ineffective and disrespectful of man inasmuch as they trivialize sexuality.

Consistent with this principle, we categorically oppose the AIDS prevention which is often described by some as *safe sex*. Under the pretext of making

sexual relations *safe*, this system compromises sexuality and in the final analysis is seen to be fallacious.

It is for this reason that we do not at all accept the initiative of some in systematically distributing condoms, acting on the presumption that these are the only means capable of slowing the spread of the scourge. We must seek and find effective, lasting solutions.

On the other hand, we encourage education programs aiming to give people precise information on AIDS. This is important and necessary. Exact biomedical data and correct basic information on the nature of the disease are indispensable for the choices we make and also for possible consequences for ourselves and others.

In a spiritual tradition which is not exclusively Christian, we think the problem should be situated in a more human context. In the end, we must appeal to the moral and spiritual values linked to love and human sexuality. It is in the raediscovery of sexuality lived out in chaste, total, and personal love within the stable union of marriage that we must seek the real remedy for this malady.

2. Some Elements Responding to Certain Ethical Problems Raised by AIDS

1) A certain line of prevention maintains that the condom is a " defensive " means, a kind of barrier to avoid contagion through sexual relations. But the problem posed is to know the extent to which the condom protects against the threat of contagion. Would we not run the great risk of deciving a great many people by advertising " sex that is safe because it is protected "! On the other hand, if it is true that one of the vehicles for AIDS is disorder in sexual behavior, would not real, fully effective prevention be to orient people towards more orderly sexual behavior?

2) A second reflection concerns the intervention of civil authorities. As is well known, civil laws do not necessarily coincide with the moral law. There is, in fact, a distinction between the legal order and the moral order. But it is fitting to add immediately that civil laws must find their *morality* in relation to service to the common good, the State's very raison d'être.

In this perspective, the " morality " proper to civil laws requires that the State also take on a cultural and educational commitment. If, as we believe, the appeal to self-discipline forms part of the *secular province* of a State, particularly in countries where religious pluralism exists, it is not admissible for the State to organize and promote a campaign for " sex that is safe because it is protected, " whose end result is the illusion of effectiveness and the irresponsible use of sexuality.

3) A third problem of an explicitly ethical order concerns the condom used as an " extreme remedy " by persons contaminated or in danger of becoming contaminated who do not intend to renounce the free use of their sexuality. This is the case with spouses where one or other is seropositive or has been stricken with AIDS. What may be said of the morality or immorality of such behavior? Once again, the use of a condom is not morally licit because it manipulates and alters the truth of conjugal sexuality, falsifying the natural, original " language, " that of the spouses' mutual donation, which is personal and total. It is this moral doctrine of the Church on the value and dignity of procreation in married life which is developed in the Encyclical *Humanae Vitae* and the Apostolic Exhortation *Familiaris Consortio* by Pope John Paul II.

4) We at last arrive at the fourth and final problem. There are some who wish to include abortion among the forms of prevention for a woman stricken by AIDS while pregnant, on account of the risk of infecting the fetus. Our view, what the Church has always taught, is clear. God's commandment, " Thou shalt not kill, " has absolute value. For this reason, no situation, not even in the case of a possible handicap in the *nasciturus*, can restrict its application.

All our reflections are based on an unbending, indestructible principle, that of human dignity. In Christian language, we say any man whatsoever (including one suffering as an AIDS victim) bears in himself the image of God, for he has been created in God's likeness. The psalmist brings us to admire this nobility in his prayer:

Lord, " what is man that you spare a thought for him, the son of man that you care for him? ...You have crowned him with glory and beauty, making him lord over the works of your hands, put all things under his feet... " (Ps 8:5-7).

Cardinal PAUL ZOUNGRANA
Archbishop of Ouagadougou
Burkina Faso
Member of the Pontifical
Council For Pastoral Assistance
to Health Care Workers

Hon. GIULIO ANDREOTTI

Unitary Action by States in the Fight against AIDS

We must thank the Pontifical Council for Pastoral Assistance to Health Care Workers and, in particular, Monsignor Fiorenzo Angelini, for having given us the chance, with this international conference, to discuss a subject which is both topical and serious.

It has been said that AIDS knows no geographical or ideological barriers. We are thus in the presence of a planetary phenomenon which can only be defeated with a great research commitment and, in the meantime, cooperation among countries in an attempt to stop it spreading.

What most strikes us when speaking about AIDS is that we are faced with an illness in which the scientific and therapeutic factor, important as it may be, is only a tiny part of the picture. Much is said, and not always appropriately, about changes which the propagation of this disease has brought about in human behaviour and social relationships. All this is right. But what we want to stress instead are other aspects, such as the relation between the sickness and the crisis in traditional values, people's ability to put scientific and technological progress to the right use, and social growth marked by justice and respect for one's neighbour.

This international conference has a question as its title — why live? — which for a moment leaves even those who know how to find refuge in Faith astounded. Precisely because the spreading of AIDS has emphasized that the problems with which we are faced are not only the result of the injustices and inequalities in the world, but also the symptom of a malaise which makes people reflect on their existence.

Never before, faced with an illness which spreads rapidly through channels still partly unknown, have we felt so in need of the men and women of science meeting here, the depositaries of that " knowledgeable charity " which wins battles, removes barriers and replaces love with hate.

The fight against evil, now as in the past, helps us to realize how life manages, thanks to people's efforts, to prevail over destruction and death. As Gandhi wrote: " The fact that there are still so many people alive in the world demonstrates that it is founded not on the force of weapons, but on the force of truth and love. Therefore the greatest and



most unassailable proof of the efficacy of this force lies in the fact that, despite all the wars in the world, it continues to exist."

Research, diagnosis and therapy — not only in their medical but also their scientific, philosophical and social aspects — are the topics which illustrious personalities from the most varied geographical areas have come together to discuss in this conference. This has once again enabled us to realize that cooperation, especially in the face of urgent and serious problems, is an assumption not only for scientific progress but also for people to meet constructively.

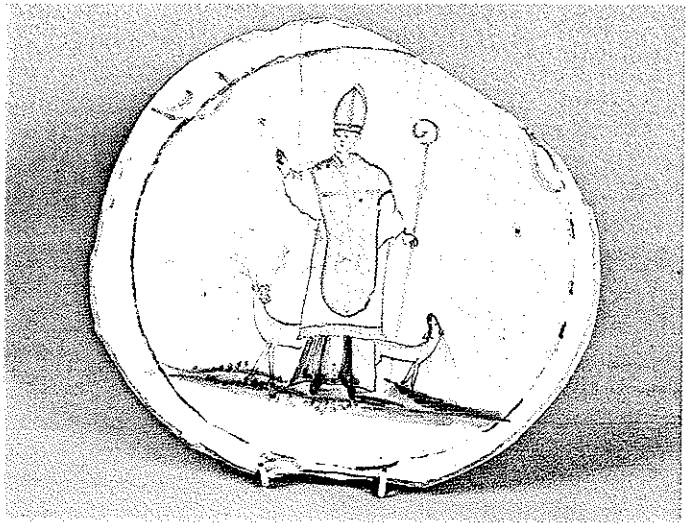
The great topics of detente between East and West and aid to development, which are, so to speak, the keynotes of our epoch, demonstrate that only through cooperation is it possible to ensure a future of peace, harmonious growth and a fair division of resources for our planet. Certainly, these goals should be pursued with realism and, I would say, a sense of proportion. Because it is not with unilateral initiatives, nor in the name of a misunderstood pacifism (that is, outside agreements) that a country can transform the arsenals of the world into granaries. Continuous and patient efforts are needed in the joint search for balances at increasingly lower arms levels. Thus the development of emerging countries is not only the fruit of donor countries' demonstrations of liberality, but rather a recognition that there are objective limits to the further growth of a rich country if economic and social well-being is lacking or insufficient elsewhere.

In the end, everything is connected. There is an interdependence which means that it is in the interests of the community of states to work together to ensure a peaceful world, to prevent too obvious imbalances between one continent and the other, and to overcome regional tensions, often heralding a more widespread crisis. Thus, when faced with the danger of the spread of AIDS, governments cannot withdraw into themselves, raise fences or put up *cordons sanitaires*. The disease is not stopped by artificial barriers. The task of those who have governmental responsibilities is to seek cooperation from everyone, both in research and to create more effective tools for preventing or stopping the epidemic from spreading.

There is sometimes the sensation that cooperation among states is slow to take off. Many governments, and especially all the European and North American ones, have equipped themselves with structures in the information and data collection fields to stem the effects of the illness. It has to be said that these structures are not always suitable for the goals for which they are intended. For example, as far as Italy is concerned, statistics say that at 31 March of this year the National Commission for the fight against AIDS had received notification of 3494 certified cases. But the same statistics specify that this number — 3494 people with AIDS — does not express the extent of the phenomenon in our country. In fact, there is a delay in notifying, which means that the number of cases of AIDS diagnosed at 31 March was greater than the number of notifications which the Commission had received up to the same date. More specifically, the delay in notification is such that only a little over 40% of cases diagnosed in a trimester are notified within the same period.

Apart from this, what I want to stress is that too often the assistance which rich countries give to poor ones to fight AIDS is limited and in many ways inadequate.

We are all well aware of the conclusions of the recent international conference of Marseilles on the spread of AIDS in Africa. The figures which emerged on that occasion and which predict that in three years' time there will be as many as a mil-



lion people with AIDS on that continent, including 20,000 children, are certainly worrying. But what should concern us most of all is that AIDS is also afflicting the African countries which up to now were considered free of the sickness, and that it is not always spread by the same carrier in the different countries, since in some of them it is mainly the men who are struck, and in others the women.

It was by looking at all these things in Marseilles that the question arose of whether a poor country, in the way an African country can be poor, is able to support the social burden — human and economic — caused by a population afflicted (to the extent of 20 to 30%) by the virus of this terrible disease without internal upheavals.

Today, in order to prevent AIDS from spreading, a systematic programme of initiatives on a worldwide level is needed, with features of immediacy and effectiveness. I therefore think it is of the utmost importance to pass from statements of principle and declarations of willingness to concrete deeds as soon as possible, in a framework which has the World Health Organization as its reference point (suitably strengthened, also in its regional structures). More in particular, I am thinking about the need to draw up global strategic lines, with particular reference to information (to which I will return shortly), prevention, sociopsychological care and assistance. Vigilance in implementing the intervention programmes in the individual countries, and a proper coordination of young people's initiatives and assessment of the results achieved are also necessary.

In this regard — and with reference to what I said just now about statistics — I think we could think about creating a data bank on a world level.

When faced with the threat of AIDS it is clear that any health action has to be accompanied by a health policy, and since the threat of AIDS involves everyone, this policy must become united and common if it is not to risk being unproductive. In the same way that, when faced with the hole in the ozone layer, the enormous increase in ecological degradation and the indiscriminate destruction of green areas on our planet, states and populations became aware of the urgent need for a joint effort, so this latter is needed in the fight against AIDS.

There is, however, an aspect in this case which should concern governments in all countries and which I think I should point out. AIDS involves the surrender of the immune system and seems to reveal people's limits and their radical impotence in an entirely particular way. The battle must be fought on various fronts and first of all on that of prevention for the so-called high risk groups. It is true that this battle still presents many unknown factors, but it must be fought because there are no alternatives.

AIDS, as a collective threat, but, above all, as a contagion whose rapid spread is aided by the progress in communications and thus in increased human mobility, requires the joint commitment of countries; a commitment which requires a consideration of some assumptions and which must lead, as I have said, to concrete working initiatives.

This conference has clearly shown that the emergence and, above all, the rapid propagation of this disease is helped by an objective situation of injustice in the world. In less favoured areas, prevention is in itself more difficult and the resources to stop the scourge from spreading are too limited. Nor, on the other hand, can populations be put in quarantine.

Today , as John Paul II confirmed in his encyclical *Sollicitudo Rei Socialis*, interdependence among peoples is neither a hypothesis nor a discretionary choice, it is a fact, and it is from this assumption that we must move because humanity will either be saved together or together perish.

Certainly, unitary action involves — as has also been recalled during this conference — the recognition and acceptance of some fundamental values and constant reference to them. But, as stressed in the final document of the Conference for AIDS Prevention, held in London in January 1988 (and in which the representatives of 150 governments participated), it is possible to pinpoint an area of mutual understanding where all the political, cultural, social and religious forces can be involved.

If we reflect on the importance of the right information and a suitable health education in the fight against AIDS, it can be seen that, more than anything else, effective prevention requires everyone's convinced and constant contribution.

Prevention, first of all, then. But, at the same time, joint action on the part of states must also cover assistance to those who are already suffering from AIDS. This aspect cannot be delegated only to charitable, welfare and humanitarian institutions. The nature itself of AIDS, as the contributions of famous scientists have demonstated, makes assistance to the sick an essential part of prevention understood in its widest sense. Just think of the damage caused by the fears and behaviour which want to isolate and marginalize AIDS sufferers. The Italian government, in its programme of urgent initiatives for the prevention of and fight against AIDS, is moving in this direction. There is no prevention without solidarity and solidarity does not admit exceptions.

On an executive plane, as the Director General of the World Health Organization recalled, it is also necessary to harmonize the different regulations, and WHO itself could promote this.

The gradualness of the steps could lead to unitary action The European Community's recent commitment in the fight against cancer is an example to be followed in this case. For cancer, there are still plenty of problems concerning the behaviour and habits of populations; this does not stop an encounter, and therefore a basic cooperation which, founded on what unites, leads to overcoming what divides. Undoubtedly these kinds of problems are more difficult to resolve in the fight against — and especially the prevention of — AIDS. But governments must also be urged to take the road of unitary action by the awareness that AIDS threatens not only humanity's present but also its immediate future.

It is above all the young generations who are subjected to this serious epidemic. This means that the only way to foresee the future is to prepare it. Those responsible for the common good thus have a particular duty which must be promptly translated into action.

Unitary action by states signifies not only tapping the mass media to the full, preparing information instruments and health education tools, or setting up structures for assisting AIDS sufferers. United action also means devoting resources to research.

Never before, when faced with the prospects of an epidemic which is spreading to all the continents and, what seems to me more serious, of an epidemic which is at the same time the cause and effect of the transformation of the fundamental values of our society, have we felt such an urgent need for the help of learned women and men. Certainly science, at least for the moment, is not able to defeat AIDS. The same science tells us, in fact, that many more years are needed before an antidote can be found.

The spirit of service which animates you scientists can certainly move mountains and overcome obstacles. The words of Paul VI are very applicable to research in this specific field: " Science, — he said — only exists in favour and on behalf of humans: it must come out of the closed circle of its research, lead to men and women and through them to society and all of history ".

A health policy on a world level needs the contribution of science. For other subjects, and specifically disarmament, Rome had the honour of twice playing host to eminent scientists from all over the world, meeting in the Italian capital to discuss the solution of the problems of nuclear disarmament and those imposed by checking chemical disarmament. What emerged from those meetings has been very useful. And in the same way, the campaign against AIDS needs the cooperation of scientists from all over the world.

As in all the other fields, scientific cooperation





should also be supported and developed here. The search for a better world, finding instruments which increase not only humanity's material well-being, is the goal of science, which must be pursued without jealousies, without egoisms, in a truly open spirit, with no secrets.

I like to remember the words of the great American physicist, Edward Teller: " Man is a sociable being. But in our society it is difficult for the scientist, the inventor to find a companion. Most of his friends do not speak his language. The yoke of reserve intensifies his solitude even more. We are even awkward with those who could understand us best of all. There has been no place for secrets in the world of ideas for a long time now. If we could find the possibility of communicating openly, there would be more collaboration. It would be clearer than your advantage. "

Cooperation, therefore, without reticence. Solidarity understood as the spontaneous participation in an undertaking which goes beyond the boundaries of scientific research and medical science. Towards an undertaking which can only be successful in the realization that what is at stake is not only the victory of good over evil understood in a physical sense, but the victory of men and women as thinking beings, to whom it is necessary to restore dignity and awareness of those values to which their functions as social beings are linked.

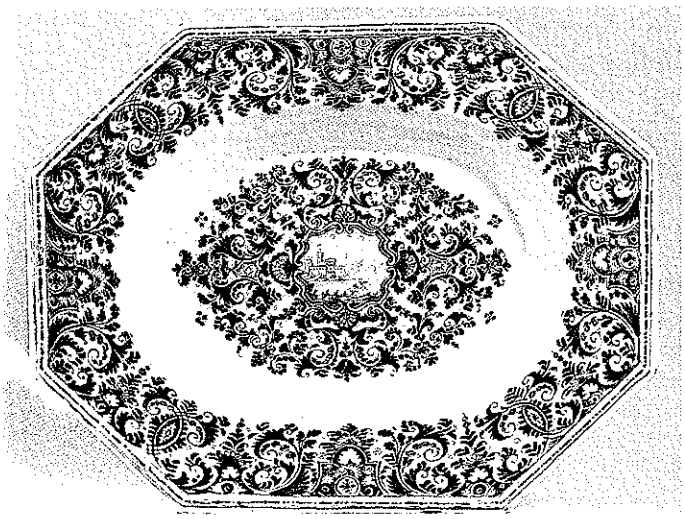
In this framework, the recovery of traditional values, such as those of the family, certainly cannot be interpreted as a return to the old patterns. Because in life, in our way of being, there are absolute values which, as such, know no limitations of time or space. Helping to rediscover these values and, above all, their nature as values which are always valid, is the duty of all of us.

Before concluding, may I make a heartfelt appeal. I know that in many African countries there is a sense of bitterness; they are asking why the rest of the world is so interested in AIDS while it has remained and still remains almost completely indifferent as regards other diseases which are also continuously claiming innumerable victims (" river sickness, " bilharziasis, rampant in 66 countries, alone kills five million of God's creatures every year). The answer is that AIDS threatens us directly and the other endemic diseases do not.

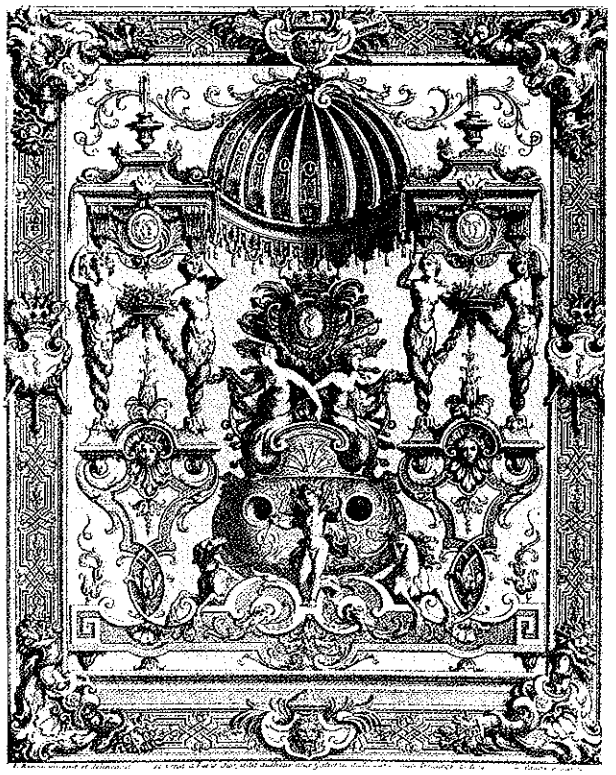
It is a fact which we cannot ignore and we must use it concretely to increase our sensitivity towards any health cooperation for people who need our help to fight the disease and rightly ask for it.

At the beginning of its work, the Pontifical Council, so providently created by Your Holiness, published the thick catalogue of the Catholic Church's health workers in the world. Even those who do not have the gift of faith cannot but bow to this gospel of real life, which asks for nothing except that the " world " imitate it, in exclusive service to those humans for whom, precisely because they are fragile and exposed, we must reserve a special place in our hearts, even before doing so in laws.

Hon. GIULIO ANDREOTTI
President of the Italian Council of Ministers



To Live: Why?



The AIDS Problem

Papers

Is AIDS a Sign of the Times?

Fr. GEORGES COTTIER O.P.

I
SOME IDEOLOGICAL PREMISES

Signs of the Times

1. The expression *signs of the times* is to be found in the Gospel of St. Matthew (16, 1-4).[1] Jesus reproves those he is speaking to for being able to predict, in their daily lives, drought or rain by the colours of the sky, but for not being able to perceive the *signs of the times* — that is to say, the very signs of the arrival of the Messiah and the Kingdom of God which he begins and announces — whether the miracles performed or signs made by Jesus, or the pre-eminent sign, he himself. The Messiah, like every prophet, must indeed show the signs that accredit and authenticate his mission. Christ would give no other sign than that of Jonah, i.e., his resurrection. Equally, signs will announce the return of the Messiah and the end of the world.

In this way a religious vision of history subtends the conception of the signs of the times, because history is understood from the point of view of an Alliance between God and his people, the latter having the duty of loyalty which derives from this relationship. Human liberty is so responsible and entrusted with a historic task that it must be aware of the quality and consequences of its actions, in terms of evil and good: fidelity or infidelity bring blessing or punishment. This is because God, who is God of the Alliance, shapes history with his omnipotent providence.

If Jesus reproves those to whom he is speaking of not knowing how to see what they should see, it is because faith is required to be able to recognise the signs of the times and because faith requires free vision on the part of the person. The object faith looks at is neither evident nor the outcome of a coercive demonstration. In this case it belongs to the set of signs.

Today the message of the signs is not a direct message: the sign, by definition, has an intermediary function: its perception as a sign leads to a knowledge of something else. Here one is dealing with signs of the action of God in history. To reach the message it is necessary to interpret the sign.

There are signs which are more or less clear, but it is this clarity which imposes itself on the interpreter. We do not arrive, however, at the conclusion that the signs are always arbitrary and that the interpretation is a subjective creation. The message of a sign can be decipherable to such a point that not to appraise it would be a sin. But the signs are only eloquent in a particular context — for our purposes, in the context of the Alliance and the Promise.

2. Pope John XXIII, in *Pacem in Terris*, took up the formula and expanded its range of application. The example was followed by Vatican II. Christians are thus invited to " scrutinise the signs of the times " and " to interpret them in the light of the Gospel, " " the people of God seeks to discern the needs and requirements of our time in the events which occur, events in which they are participants with other men, insomuch as they are the true signs of the presence and plan of God. " The text states: " Faith, indeed, invests everything with a new light and makes us know the divine will as to the integral vocation of man, and thus directs the spirit towards fully human solutions ."[2]

The broadened use of the formula is the logical extension of the sense conveyed by the New Testament. It clarifies the duty of Christians, that duty being to assume their historical responsibility. This supposes that a specific historical time has a sense and that God addresses himself to us at every such time. A knowledge of the word that he directs to us presupposes a double condition. The events and facts of our time must be read in the light of the Gospel by the eyes of faith. But this condition depends in its turn on a preliminary condition: it is important to know how to distinguish, amongst the chaotic mass of facts which the time brings, those which are truly decisive, because only these last, indeed, deserve to be called signs of the times. All the resources of intuition, reflection, analysis, and without doubt the charism of prophecy are required to make this distinction. Only then will a fact, which is at first perceived as only one amongst many, impose itself upon the ethical consciousness of an age with the force of its determining character. From what has been said above, it must be concluded that such a sign can flower in the historical consciousness, with varying degrees of force, quickly or with delay, and can be the object of great or small agreement. The space of signs of the times has frontiers which are badly delineated. True detection is not devoid of critical prudence.

3. A twofold observation may here be proposed.

The first is of an epistimological nature. As we have seen, the notion

of a sign of the times is a theological notion, and thus it is within the framework of theology and religious thought that it acquires meaning. However, to the extent that theology is wisdom, this notion can contribute to any human or humanist reflection on the most important phenomena of our age.

But one should not mix up the disciplinary categories of knowledge. The notion of a sign of the times lacks meaning in a certain number of sciences, like, for example, molecular biology, which are directly involved in fundamental research into the AIDS virus and the possibilities of a vaccine. The same is true for all the areas of medicine that directly depend on scientific branches of this kind.

But, to the extent to which the appearance of AIDS is a cultural fact which goes beyond the medical realm in a narrow sense and calls for a multi-disciplinary approach, the question must be put: is AIDS a sign of the time?

Scourge of God?

4 The second observation is of a totally different nature. The brutal and unexpected apparance of the disease and its dramatic character have provoked a terrible social and cultural shock. The question 'why?' has arisen naturally. Answers have been sought, and amongst these have been religious answers. Recourse has been had to notions like scourge of God, chastisement, punishment, etc. At this point the theologian and the believer are directly called upon to respond.

We should not be surprised that the appearance of an unforeseen evil, which from a human perspective cannot at the moment be mastered, should push the spirit towards a search for an explanation which involves the transcendent. It is a way of escaping panic. Even more so because this kind of response has roots in a series of ancient beliefs which are to be found in some measure everywhere: in the doctrine of Karma in Hinduism, for example, or in certain myths of ancient Greece.

Behind these beliefs there is an intuition that the Judeo-Christian tradition has slowly sharpened and purified — the intuition that invokes the idea of repayment. In a totally generic fashion, what is perceived is that man's acts are not without consequences, and that they yield results in the spheres of good and evil. In other words, therefore, we encounter the perception of the ethical responsibility of man, a responsibility subjected to the norm of transcendent justice.

This intuition has been progressively developed and freed from the overly material ways of understanding it. This purification is to be placed within the revelation of the free gift of God in the creation and the election, and in the revelation of the meaning of sin as lack of faith and rejection. Merciful and patient, God calls the sinner to conversion. And it is when this is rejected that the logic of sin and punishment manifests itself — something, however, which often represents a new invitation to return to God. Thus can one see in punishment a theophany directed towards the sinner (cf. Luke 19: 41-44).

And it is within the context that has just been outlined that the great stages of the biblical doctrine of repayment are contained. This doctrine is based, in its development, on human experience; it appeals to responsibiliy and solidarity; and in early times it had a collective significance: the whole people was involved because of one of its guilty members; and the guilt affected generation after generation. Up to this stage the doctrine invoked the justice of God: if I am unhappy it is because of my sins or of one of my relatives; inversely, the presence of ten just men would have been enough to save Sodom. A decisive step ahead was made by the prophets — most notably by Ezekiel. They maintained, when confronted with the obstacles of this position, that each individual was fully responsible for his destiny; he could always damage this destiny but conversion always remained possible (cf. Ezk 18).



This element of response was not, however, sufficient, and the complete solution would only come with the revelation of life beyond the grave. Indeed, if we have only this life a question arises: why is this law not always applied? The just man should always be happy, but experience demonstrates the opposite. Job, Ecclesiastes, and the psalmists expressed the torment of this question with great intensity. They suggested certain replies in outline: repayment deferred at the moment of death, or the attitude of serene faith in God; Job, in his intense, humble and adorational faith achieves a certain direct experience of God (cf. Jb 42:5); others expand the horizon by passing from the level of repayment to that of redemption (cf. Is 53: 10; Ps 22).

The last stage was overcome with the faith in personal resurrection at the end of time. The Jewish martyrs at the time of struggle against Antiochus Epiphanus were sustained by the hope of a resurrection which would reward their faith. The Book of Wisdom contains clear statements of faith in immortality.

The New Testament made the authentic tradition of Israel on repayment its own: God would render payment to everybody for his works. The decisive proof of perfect repayment is the resurrection of Jesus, who gave his life to redeem our sins. The questions left unanswered in the Old Testament found their replies in the life of Jesus Christ.

Sign of the Times

5. It was necessary to call to mind, if only summarily, the development of the doctrine of repayment before returning to the question with which we are concerned. The aspects of the doctrine of repayment that we have considered according to the order of their appearance remained present in the popular consciousness at the time of Jesus. Its archaic forms were still very much alive, and it was not only to the most evolved forms of this doctrine that reference was made. And it is in this context that we must understand certain words of the Lord.

In the Gospel according to Luke we find: " At this very time there were some present that told him the story of those Galileans, whose blood Pilate had shed in the midst of their sacrifices. And Jesus said in answer, Do you suppose, because this befell them, that these men were worse sinners than all others in Galilee? I tell you it is not so; you will all perish as they did, if you do not repent. What of those eighteen men the tower fell on in Siloe and killed; do you suppose that there was a heavier account against them than against any others who then dwelt in Jerusalem? I tell you it was not so; you will all perish as they did, if you do not repent " (Luke 13: 1-5).

The teaching is clear: the evils that befall certain people are not a demonstration of their sins — they are, rather, a sign directed towards everybody with a view to repentance.

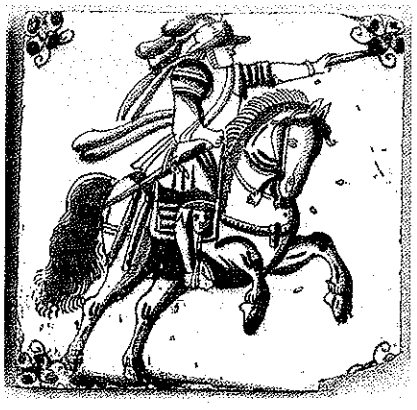
Another event gives us an even more direct answer to our question — the beginning of the account of the healing of the man blind from birth, which is to be found in the Gospel according to John. One reads the following:

" And Jesus saw, as he passed on his way, a man who had been blind from birth. Whereupon his disciples asked him, Master, was this man guilty of sin, or was it his parents, that he should have been born blind? Neither he nor his parents were guilty, Jesus answered; it was so that God's action might declare itself in him " (John 9: 1-3).

6. Should we now speak of the signs of the times with regard to the evils that befall a single human group or humanity as a whole? The first sense of the New Testament formula is to be found, as we have seen, in the coming and the presence of the Messiah and the call to conversion that this coming implies. It is the appeal to service and the giving of oneself, of which the most important tracts of our age are the bearers, which justifies the extended sense that the Council adopted. But what about AIDS?

It constitutes, in our midst, an especially striking representation of evil. This is the first point. It is necessary to look for the origins of this evil, this disease, in a collection of natural factors.

But God dictates natural events, even though he respects secondary causes. He does not really want the evil of sin, whose cause lies in the choice of created freedom, but he allows what takes place to take place. He sometimes wants, as a consequence and ' per accidens ', the evil known as the evil of punishment.[3] And it is from this point of view that punishment and repayment are understood as an invitation to conversion. In this way God can address himself to every individual in the intimacy of his conscience: a test, a disease have their meaning in a spiritual itinerary. When one is dealing with phenomena of a social breadth, the evil is not present as a way of showing that the victims are guilty — it contains an appeal to all to reflection and conversion. Such is the lesson of the Gospel texts that we have cited.



The second is indubitably more decisive. It is that of encounter with, and love of, one's brother. Here we can introduce the words on the universal judgement that we read in the Gospel of Matthew (Mt 25: 35-46): *' I was hungry... I was sick... when you did it to one of the least of my brethren here, you did it to me '*. The Lord Jesus identified himself with these ' least '. Who are they? They are the weak, they are those who are defenceless against the innumerable threats of existence (they could be, therefore, in one way or another, at one moment or another, any one of us). Towards them there should not be an attitude of condescension but an attitude of service and of deference: are they not perhaps, in their dejection and because of it, the privileged brothers of Christ? In this respect they are a sign for all of us, an appeal made to the resources and the inventiveness of our love. I would say, therefore, that the principle *sign of the times* is to be found in the presence amongst us of *those who are ill because of AIDS* and abandoned to the loneliness of a dejection which appears, in human terms, to be without remedy.

II
SOME ASPECTS OF THE QUESTION

' Why Now? '

7. We have seen in what sense it is legitimate to talk of signs of the times. These signs call for an interpretation. And it is from this point of view that I would like to offer certain reflections.

I will start with a question posed by scientists which seems to me to be highly significant: *why now?* Why has AIDS broken out now and not previously? In the opinion of Professor Mirko Grmek this is indeed the ' fundamental question '.[4] This question is posed within the context of the history of medicine. We can integrate it

into our reflection upon the signs of the times in two ways.

The first is the more obvious and has the value of an indicator: the question concerns time, and more precisely the true significance of a precise moment (our ' now '). The second is expressed by the same author: " this question goes beyond the context of virology. In order to solve the question of the origins of the present pandemic it is necessary to consider a complex of factors in which the biological and the social are inextricably bound up. "[5] Further on it is stated that the sought-after response must be ' scientifically based ', that is to say, that it must be based on facts which are correctly established and verified. And the text continues:

" Today, a great part of the enigma is resolved: the present pandemic of AIDS broke out because of a conjunction of circumstances which facilitated the transmission of the very virulent strains of an ancient virus: sexual relationships of a quantitively new kind (organised homosexual promiscuity, the generalisation of certain forms of amorous behaviour, the mixing of populations and journeys involving an important expansion in the choice of partners, etc), the introduction of other people's blood or different blood products in circulation and the breaking of the pathokenosis — something which was essentially a result of the very great decrease in other infectious diseases. The majority of these events are very recent cultural constructs. "[6]

I am not sufficiently informed to be able to pronounce on the concept of pathokenosis which is offered by the author and which implies that " the frequency of each disease depends, apart from different endogenous and ecological factors, on the frequency of other diseases in the same population. "[7] What seems to me significant is that the plurality of factors presented are not all of the same order. The convergence of such factors created the ' circumstances ', the conditions propitious for the devastating career of the virus. The author refers to them with the phrase " very recent cultural constructs. "

In this way what is taken into consideration is the social and cultural dimension of the disease. Should one therefore see in these non-biological factors simple ' circumstances ' or should one see causes? Certainly, from a biological point of view, the immediate cause is the retrovirus. But the above-mentioned factors seem to constitute causes, in the true sense of the term, of the rapid and lethal propagation of this virus. Certainly, we are probably dealing with a mutation of an old strain. But its propagation certainly would not have occurred without the action of other factors The full significance is not to be found so much in the multiplicity of these factors but in their heterogeneous character — it is this which requires us to have an approach to these problems which is intrinsically differentiated. In other words, what we should focus our attention upon is the globality of the phenomenon

I will attempt to identify certain component parts of this globality.

8. First of all there is obviously the biological component, and this is the basic component. It has been noticed that a disease has never before mobilised in such a short time so many researchers, scientists and medical doctors. But perhaps this is partly explained by the paradoxical behaviour of this virus — something which provokes scientific curiosity and seems to open up new fields of exploration. Chronological coincidences have been similarly noticed: AIDS began to expand at the moment in which man, for the first time, was able to identify and isolate a pathogenic human retrovirus. In other words, the disease had, so to speak, an appointment with knowledge. There is another coincidence: in 1977 smallpox — " a viral disease which in the past was the greatest killer of men " — officially disappeared. " The last person, to have it was an African Somali. And it was from Africa that there came the germ which has taken its place. "[8]



These coincidences are not proof. If it is understandable that the scientist is loath to see them as fortuitous, as explaining nothing, one must be very circumspect in suggesting an interpretation. I would say, therefore, that similar circumstances illustrate the condition of man in his struggles for existence — struggles that he is compelled to engage in. He should not consider as definitive the defeats that he suffers; he should rather see in them challenges to be met. If humanity devotes appropriate efforts to meeting them it will be able to overcome them victoriously. Humanity must have exactly the right attitude and remember that risk is a dimension of existence.

This observation leads us to a second consideration. AIDS made its brutal appearance at a moment when medicine could boast of an uninterrupted series of conquists and successes, and to such an extent that medical opinion held — with verisimilitude as it turned out — that it was about to dominate all afflictions.

It was considered to be only a question of time. From many points of view the behaviour of the AIDS virus, at the outset, disconcerted those in responsible positions. The initial explanations reflected this perturbed reaction: it was thought that the person responsible for the virus was a foreigner or someone on the margins of society — the world of homosexuals, Haitians or Africans. The virus came from someone else, and from somewhere else.

Medicine, which is legitimately proud of its own successes, must also judge itself from the point of view of the civilisation to which it belongs, and it must do this in a very radical

fashion. Our industrialised societies, which have a very high standard of living, are societies which strive to put death to one side and to forget about it, in contrast to traditional societies which know how to live with it on familiar terms. This marginalisation, to which medicine itself contributes, obviously brings with it a marked measure of illusion. The appearance of AIDS, bringing with it the cruel and rapid death of young people — a death against which we are defenceless — represents the powerful return of death to the horizons of our culture. The return amongst us of the image and the thought of death is not in itself a negative thing; it can have the effect of leading us back to a more authentic awareness of our human condition, if it is true that the first sense of the Oracle's utterance to Socrates *(know yourself)* was: Remember that you are mortal.

The Symbolic Property

9. We should not minimize the importance of the cultural trauma that AIDS has caused.

With good reason the effect of this epidemic has been compared to the effect of the great epidemics of the past, epidemics which are analagous because of their devastating power and the terror that they unleashed. This is because an epidemic or a disease *also* exists in the imagination of a population. It is true that at the moment, or at least with regard to Western countries, alcoholism and road accidents cause more deaths than AIDS.[9] Equally, it should be observed that every age ' privileges ' its disease as the principal scourge. This was so in the last century with consumption. Thus there is a cultural fact which indubitably cannot be eliminated: the fact of the symbolic impact of the disease.

Now, in the case of AIDS this symbolic impact acquires a particularly intense power because the symbols involved impinge upon the very sources of life. Love, sex and blood, all of which are bearers of joy and fecundity, become sowers of death. Everything happens as if their action, and the meaning of such action, was in revolt against itself in a movement of self-negation. Love tends towards the union and fusion of beings; AIDS separates them — because the other, in the act of union, becomes that which menaces life. It is as though love, and no longer hate, brought death. In the same way blood, a principle of life,[10] is transmuted into a bearer of death when the foetus is infected by the mother or in the case of blood transfusions. The impulses of life, therefore, become carriers of their own negation. This tragic condition makes man the killer of man in a way contrary to his nature. This is something that the social imagination acutely perceives. How could a similar interplay of symbols not generate fears? The ambiguity itself develops these fears: to love means to injure, the transmission of life means the killing of life.

Such a situation, which introduces contradiction into the interior of the fundamental impulses of the human being, forces our thoughts to rediscover the *human* sense of those life potentialities which are menaced.



III
THE ETHICAL CHALLENGES

Solidarity

10. We can observe a certain number of ethical challenges raised by AIDS when thinking along the lines of what has gone before. This is something which now affects humanity on a global scale. It does this in various ways and with different characteristics according to the regions involved. Furthermore, the situation is evolving rapidly. It should be remembered that this planetary dimension involves an urgent need for solidarity and mutual help, something that has been perceived at the level of international bodies like WHO, but which should be forcefully developed in numerous directions. It has been observed that the ' new ' infection has brought about a process of scientific collaboration which is without precedent. It is useless to dwell at length upon this positive point which is the object of a wide consensus. I will address myself, instead, to those aspects which present difficulty. Here I must content myself with touching upon subjects all of which require much more detailed treatment.

Those Who are Seropositive

11. The first problem concerns those who are seropositive. One of the paradoxes which AIDS often brings out is the role that such people have in the transmission of the disease. The carrier of the virus, whose illness is not declared and perhaps never will be, is able to transmit the illness. Furthermore, the seropositive person knows that he is very likely indeed to be afflicted in the more or less immediate future. Since most of these cases arise because of sexual relationships which are often outside marriage or of a homosexual character, the seropositive person, not being able to speak freely, finds himself locked up in an anguish caused by the threat of death. He fears that if he speaks he will enter a second loneliness or more often that he will rejected by his relatives, friends, or will lose his job. This excessively heavy burden of anguish often provokes psychic disturbances and imbalance which in their turn weaken the psychological and

moral defences at the moment of the appearance of the illness. Psychiatrists have drawn our attention to the depths of drama lived out by many such people.[11] On this subject one particular problem must command our attention: all too often there exists a contradiction between the requirements of help for seropositive people and campaigns in favour of prevention which are launched by governments. These campaigns, to which I will make future reference, dwell upon the extreme gravity of a deadly epidemic and seek to dissuade those who could be contaminated from yielding to practices at risk. In this way they probably manage to reduce the number of seropositive cases, infected people, and potential cases. But their effect on people who already know that they are seropositive is inauspicious, and generally speaking without respect or consideration: they do nothing else but aggravate the feeling of guilt, a feeling which is a component element of their anguish. Here one touches upon a delicate problem which requires urgent reflection. It is a question of justice.

12. At this point we come to those problems which concern prevention and the responsibilities of the state and public authorities. Once an epidemic reaches a certain level the state has a duty to intervene. This it does in various ways, for example by allocating funds. But what most attracts our attention is the information campaigns.

The abrupt appearance of the disease, the powerlessness to find an effective remedy, the emotion provoked by the devastating effects of this scourge — all these explain the great hurry involved. This speed, however, has borne the marks of precipitate action. From the outset, however, there should have been an attempt to consider the phenomenon in all its complexity.

In general recourse has been had to a purely biological defence; an attempt has been made to halt the rapid transmission of the virus. This has an undoubted impact, but it is not the only response possible. It has been seen as the only way by which to erect an immediate barrier, and has involved an awareness of the sexual practices of a part of the population and in particular of groups at risk. But what is most debatable is the nature of the publicity that these campaigns have employed by which prophylactics have been presented as the major barrier capable of halting the advance of the epidemic.

All these campaigns probably involve the aggravation of the evil they are fighting. This because solely with regard to the effectiveness of the means employed one cannot be satisfied with a consideration of the immediate effects — one must consider matters in the basic terms of a certain length of time and by being aware of all the dimensions of the human being. One cannot ignore the moral aspect when considering these essential dimensions.[12] Indeed, the exercise of sexuality engages the whole person. And AIDS, which brings death by using the ways of fecundity, calls for the use of means which take into account all that is threatened or afflicted in the human being. An exclusively biomedical response is in itself limited and limiting. This limitation involves an ungratefulness towards the integral nature of the object of prevention, which in this case is human sexuality. Now the problems of human sexuality are intrinsically of a moral character. A conception of policies of public health which seeks to detach itself from this moral character amounts to yielding to a technocratic mirage and thus to a failure to achieve the goal desired. It involves behaving as if contraception did not pose in itself a question of morality and was nothing but a morally neutral form of hygiene.

This is not in the least the case. It is here that one finds the contradiction: in order to ensure that these measures are applied it is necessary to make them attractive, even though they seek to be neutral. To achieve this, use is made of publicity which goes in the direction of permissivism. Now, in fact, permissivism is an open door to disorder of a social nature, which in turn is one of the undoubted principal causes of the propagation of AIDS.



13. We have in fact been able to notice that what is called the ' liberalisation ' of customs, which has been a characteristic of our permissive societies, has offered a welcoming terrain which is favourable to the striking propagation of the virus.[13] Permissivism, favoured by the spread of contraception, has favoured frequent sexual relations between adolescents. Promiscuity, easy exchanges, ' sexual tourism ', and perverse forms of behaviour are all further expressions of this permissivism. It seems that what matters most is individual liberty, and that this in particular finds its affirmation in the all-important search for physical pleasure and the multiplication of partners. This mentality has found fertile ground in the world of American homosexuals and it is probably because of this that they were the first target of the virus. Who fails to see that by encouraging such practices, and even by proclaiming ethical neutrality towards them — which is a way of asserting that being aware of them is unimportant — really contributes to a disfigurement of the image of human sexuality? In such a way does one become an accomplice of the degradation of the humanistic concept of man and of the values that it contains. The cultural defences

which are necessary for an effective fight against this scourge are weakened at one blow.

I will offer an example. Prophylactics were distributed free to adolescents who had gone to a jazz concert. Some cases of contamination were perhaps thereby avoided. Yet there was above all else a reinforcement of the concept held by these adolescents of sexuality — a concept which reduces sexuality to a physical search for ephimeral pleasure which lacks a responsible commitment by the person involved. Sexuality which is banalised and without risks is a perverted sexuality which is detached from its special ends. In such a way these ' liberated ' adolescents are prevented from reaching the psychological maturity of the adult to which they have a right.

In this way the result of the campaign directed at young people, in which love and prophylactics are united in slogans and images, is to diffuse a mutilated image of sexuality. They are an offence to young people who should be prepared for the responsible exercise of the vocation of being a man or a woman.

To remember these things does not mean to yield to a moralism which hides its ineffectiveness behind the presentation of indignation. It means to invite a civilisation which is in the process of forgetting about such matters to take full cognizance of this complexity — that is, of this richness which constitutes the dignity of the human being and which AIDS threatens in a variety of ways.

The Role of Public Powers

14. At this point we come up against a widely diffused objection — the neutrality of the state in a pluralistic society. The state must not interfere in the private sphere and the way by which sexuality should be practised is the exclusive concern of each individual. This objection is based on a series of misunderstandings. One can hear it said, for example, that it is not the business of the state to ' moralize ' or to teach morality. If by this is meant that the state must not intervene in private life, the assertion is correct because each individual is responsible for the conduct of his own existence. But at this level the state is already called upon to intervene to the extent to which certain actions and certain practices have a public consequence: for example, it would take measures to protect childhood or adolescence. But if instead it is meant that the state can ignore moral values, act as if moral values were exclusively the competence of the individual, in the sense that it was up to the individual conscience to decide between good and evil, then such an assertion is not acceptable. Moreover, its integral application would lead to the ruin of society. We cannot deny that we are now dangerously advanced down this slope. Furthermore, we see that a natural and amoral state does not exist: when a state declares that it is a state based on rights, it thereby admits a certain number of values — those which are at root the the rights of man. It equally recognises the fundamental character of the monogomous family and, implicitly, the value of acts and forms of behaviour which belong to it and the rights and duties which derive from it. It recognises the rights of the child regarding the family. The state, certainly, is not required to judge the moral responsibility of individuals. But at the same time it cannot ignore the intrinsic relationship between human sexuality and the institution of marriage, and this in the name of the rights of the person that it must uphold. Refraining from legislating in this area and placing transient relationships, married couples, and unmarried couples on the same level, as if this did not concern the well-being of society, does not, on the other hand, constitute neutrality — it means becoming an accomplice to the moral disorder which is indubitably one of the causes of the rapid propagation of AIDS. And an insistence on the human dignity of sexuality and the responsibilities that it implies as a part of the programmes of sexual education does not involve a lack of due respect for pluralism. Permissivism means a regression of values; it destroys one of the instruments necessary in the fight against AIDS. One may add that this permissivism is often accompanied by a critique of moral values expressed through caricature and ridicule.

The state, to the extent to which it is responsible for the common good of society — which, precisely because it is a society of people, implies essentially an ethical dimension — therefore has the duty to contribute to the moral reawakening that we need. It can do this with laws and measures in favour of marriage and the family; it can also favour cultural and religious groups — and in particular the churches — in their task of moral education. This would not lessen its neutrality because with regard to the concept of society neutrality does not exclude but presupposes the existence of a consensus of fundamental and common values which remain, let it be said, very much alive in the consciousness of the peoples of the world.

15. There exist two theoretical, or rather theological, obstacles to the state's assuming responsibility for these ethical requirements. The first is legal positivism, which reduces law to a kind of recorder of predominant customs. In this way law is weakened at the level of its own justification, and in particular at the point where it should function as an instrument which acts to correct deleterious social practices.

The second obastacle is to be found in the fiction of the full and equal responsibility of every citizen. One should certainly not call into question the equality of all before the law,but one should further understand the duty that society has to help its weakest members. An information pamphlet on AIDS which was published by a European government for its schools contains an article by a philosopher which states that the freedom of individuals to decide on their own, and with responsibility, what use they intend to make of their sexuality is an essential value which should be protected. The argument is unreal and, it should be said, hypocritical, if we consider a population at high risk such as the world of drug-addicts, whether one is talking about their sexual lives or the use of syringes. This is because those who find themselves dependent on drugs have often fallen into this state because they suffered from major psychological traumas and do not have the full use of their liberty. They have a right to our solidarity. Directing them to their ' responsibility ' would mean condemning them to having to face up to this fight alone, a fight they have lost before it has begun.

To tell the truth, " refusing to face up to the moral problems is, on the

other hand, already in itself the adoption of a moral position."[14] It means opting for the permissive morality of individualism and reserving morality to the individual; and the supposition, probably unconsciously, of amoralism on the part of the state

The above observations help us to understand that in order to face up to this fatal epidemic making use of the channels proper to life and its transmission, a return to the fundamental values of human existence is necessary for everybody: individuals, spiritual families, and public authorities. In this sense AIDS really is a sign of the times

Some Further Observations

16. I have referred to drug-addicts. What policy should be adopted to avoid the use of already used syringes without it appearing that the distribution of sterile syringes is an act of weak complicity as regards the scourge of drugs? How should one plan the treatment of children who receive the virus from their drug-addict mothers? Here there is a series of questions which also concern us.

The gap which separates rich countries from poor countries displays itself in dramatic fashion in the case of AIDS. Africa, which has been afflicted to the full, finds itself cruelly unprovided for. This situation calls for our solidarity. The danger of applying 'double standards' and yielding to laxity in applying the norms of deontology when it comes to medical experiments also exists. Those who are in a position of power are tempted to abuse the weakness of the weak and to take advantage of the sick from the third world in testing new medicines and vaccines without adopting the necessary precautions.[15]

17. Finally, the global phenomenon of AIDS forces us to pay special attention to the phenomenon of the *mass media*, which in the future will represent an important feature of our civilisation. The media have been mobilised to warn the population of the threats that the new epidemic presents. What one expected from them was clear and objective information. Certain medical journalists have performed this task in notable fashion. But, overall, can we give a completely positive judgement? An extremist dramatisation, or, on the other hand, the clamour that has been made about remedies or vaccines that were going to solve everything, have disturbed public opinion. Certain scientists have lent themselves to operations of communication which have not contributed to an achievement of a serene and impartial awareness of the problem. Both panic and false hopes aggravate the situation and favour the ostracism of the victims of AIDS or those who are seropositive. The phenomenon of the consciousness of this new disease and the image of it that has been created via the media calls for a serious reflection upon the norms of the deontology of information.

Conclusion

18. One needs to further take into consideration three aspects of the question which are of an ethical and legal character — such as the protection of those who are seropositive and those who are ill with regard to their jobs and their insurance. These in turn emphasize the profound repercussions that AIDS has for the destiny of people afflicted or threatened by the disease, and their social integration. In fact, those with AIDS must confront "not only the threat of this evil but also the suspiciousness of a social environment which is afraid and instinctively distancing."[16]

Is AIDS a sign of the times? It certainly is in that it reveals those profound disorders of our society which call the meaning of sexuality and human love into question. It is probable that costumes, taken as a whole, have never in any age gone beyond a very mediocre level. But what characterizes permissive ideology is the loss of a sense of sin, the banalization of sex and of everything that is linked to the giving of life, and the conformism of the casualness with which vital problems of great importance are treated, that is, when they are not deliberately rejected. The new disease forces us to look things in the face.

AIDS is a sign of the times especially and primarily because of the urgent call to love our neighbour and to solidarity which it addresses to us. Love for one's brother must become inventive in preventing the great suffering brought about by the disease. We must make the moral, psychological and physical suffering of all those who are afflicted by this evil our own: "Believe me, when you did it to one of the least of my brethren here, you did it to me" (Matthew 25: 40)

Fr GEORGES COTTIER, O.P.
General Secretary of the International Theology Commission

[1] Cf. 12:38-39, 24.3-30; Mk 8:11-13; Lk 11:16-29; 12:54-56; 1 Co 1:22. I have dealt with the problem in *La mort des idéologies et l'espérance* (Paris, 1970), pp. 143-144

[2] Cf. *GS*, no. 4,1 et *passim*.

[3] St. Thomas, *ST*, I, q. 49, a. 2, explains that, since *ad ordinem universi pertinet ordo institiae*, God is the author of the evil of punishment *ex consequenti et per accidens*, but not of the evil of sin.

[4] MIRKO D. GRMEK, *Histoire du sida* (Paris, 1989), p. 223; cf. pp. 232, 248.

[5] *Ibid*., p. 223

[6] *Ibid*., p. 248

[7] Cf. on this concept *ibid*., pp. 248-252.

[8] Cf. M. GRMEK, *op. cit*., pp. 9-10

[9] In this regard, in *Le sida, rumeurs et faits*, interviews by Emmanuel Hirsch (Paris, 1987), cf. the reflections by Professor Claude Jasmin, pp. 89, 101.

[10] Cf. JEAN-PAUL ROUX, *Le sang. Mythes* (Paris, 1988)

[11] Cf. *Phychologie du sida*, edited by Professor André Ruffiot (Liège-Brussells, 1989).

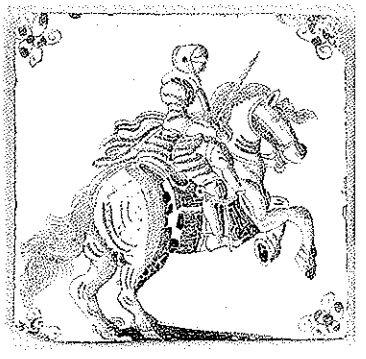
[12] Cf. Cardinal BASIL HUME, "AIDS: Time for a Moral Rebirth," in *The Times* (January 7, 1987), reproduced in *Documentation Catholique*, no. 1935 (March 1, 1987) pp. 259-261.

[13] Cf. MIRKO D. GRMEK, *op. cit*., pp. 263-266

[14] Cf. Cardinal B. HUME, *op. cit*.,

[15] In this connection, cf. remarks by Xavier Thevenot, in E. Hirsch, *op. cit*., especially pp. 193-196.

[16] Cf. JOHN PAUL II, Christmas Address 1988, "May Each Be Able to See the Poor Christ in Our Poor Brothers and Sisters," in *Documentation Catholique*, no. 1977 (February 5, 1989), p. 107



The Importance of Basic Science for the AIDS Epidemic, HIV, and Hepatitis B Virus

Professor BARUC S. BLUMBERG

Introduction

Medical research has, in the past fifty years, made enormous strides in the understanding of biology and the medical problems related to it. On many occasions the applications have come, not from research focused directly on the problem at hand, but from prior and/or concomitant projects which were not goal-directed and which often arose from the study of apparently unrelated phenomena or even different organisms. Basic science is designed to increase understanding of the natural world. In medical science there is a conviction, even a faith, that this knowledge will in due course lead to the resolution of problems related to the improvement of health and the relief of disease.

Hepatitis B virus (HBV) has many similirities to human immunodefficiency virus (HIV) in terms of epidemiology, virology and molecular biology, and these have been reviewed at length elsewhere. In this paper I will discuss several examples of how research on HBV relates to research on HIV. It will emphasize similarities and differences in the uses of data and in particular how different attitudes towards the diseases caused by the viruses have had an impact on research outcomes and style

Public perception

HBV is, overall, more common than HIV and the diseases it causes (acute hepatitis, chronic hepatitis, cirrhosis of the liver, primary hepatocellular carcinoma) have resulted in far more morbidity and death. It is estimated that, worldwide, there are about 300,000,000 carriers of HBV (compared to 5-10 million carriers of HIV). About 1,000,000 deaths per year are attributed to HBV infection In 1986 there were about 150,000 cases of AIDS in the world, about half of whom will die in a given year. Widespread HIV infection is recent (since about 1980) and in the early years of the epidemic, uncommon, while HBV may have infected humans since the origin of the species.

Despite these differences in morbidity and mortality hepatitis is far less feared than AIDS. Why is this so? There may be several reasons. In Western countries people usually associate HBV with acute hepatitis since this is its most apparent common manifestation. Acute hepatitis is self-limited in about 90% of cases and complete recovery is the usual outcome. Rapid death (" fulminant hepatitis ") occurs in only a small percent of the acute cases and the chronic forms in only about 10%. Chronic infection, which carries with it the devestating outcomes of primary cancer of the liver, cirrhosis and chronic liver disease, usually commences as an occult infection, often in infancy or childhood, and it may remain asymptomatic for decades. Hence cause and deadly outcome are not associated in the public consciousness in areas where HBV carriers are relatively rare. In Asia and Africa, however, HBV infection more often ends with the deadly chronic manifestations and the disease is more gravely regarded.

HIV infection, on the other hand, is greatly feared. The first public knowledge was of a disease which appeared to have universal fatality in a span of a few years When HIV was identified it was recognized that there was an extended asymptomatic period. Follow up of the carriers revealed that death was highly probable even though the incubation period was longer than had been inferred in the pre-virus discovery period. The introduction of a treatment (AZT) has been encouraging, but that treatment does not eliminate the virus even though it significantly increases survival and the quality of life before the patient becomes refractory or develops toxic side effects that are intolerable AIDS and HIV infection began to occupy the role that cancer had in the minds of the public and this in turn led to increased research funding. It now equals about 1 billion dollars per year in the United States, equivalent to the amount spent on cancer. Research on hepatitis is awarded only a fraction of the funds spent on HIV by the US Federal Government and other agencies.

There have been several dramatic and curious consequences of these differences in public perception of HBV as compared to HIV infection. Soon after we discovered HBV it became apparent that we could identify asymptomatic carriers who were at risk of transmitting the virus to patients to whom their blood was transfused. It was also apparent that individuals identified as carriers might become stigmatized if the information became public. However, there was no great advantage of identifying HBV carriers from the viewpoint of enforcable public health measures or of treatment. At the level of knowledge available at the time there was little that could be done except preventing the use of their blood for transfusion. In addition, there was no demand

from the public to apply general screening for HBV and nothing approaching the near-hysteria which occurred after the discovery of HIV when some urged compulsory HIV testing, even though it was unclear if public health or therapeutic benefits would acrue.

Much of this difference in the public reaction to proposed health measures is the difference in the attention given to HBV by the media. Advances in HBV research, (for example, the discovery of the virus, the invention and testing of the vaccine) were relegated to the science sections or back pages of the newspapers, while even preliminary scientific findings related to HIV receive front-page coverage. This may be advantageous in respect of increased funding but it has complicated the research process for HIV, particularly at the applied level. Because of public concerns the researcher may be inclined to take a direction he would not have chosen if he were operating in a research environment which attracted less public interest. An example of this is the decision by the US Food and Drug administration to alter the requirements for the clinical trials for potential HIV therapies. They will allow use of a drug by patients while it is progressing through the complete cycle of trials. This shortening of the testing process has not in general been allowed for other medications, even for the treatment of cancer.

High risk populations for HBV and HIV

HBV and HIV are both common in several risk groups, but not in all. Drug abusers, male homosexuals, recipients of blood transfusions and blood products, the newborn children of carrier mothers and sexual partners of infected persons, are high risk groups for both. However, HBV carriers are very common in several Asian populations (China, Taiwan, Korea), but HIV is scarce. Because of the similarities between the viruses, the same populations and, in some cases, the same serum specimens that had previously been studied for HBV were subsequently used for studies of HIV. An example of this has been the use of serum specimens from male homosexual volunteers for the trials of HBV vaccine.

In 1971 we introduced the concept of a hepatitis B vaccine derived from the blood of HBV carriers. After preliminary animal and human studies, beginning in the late 1970s, male homosexuals in New York, San Francisco and elsewhere participated in the field trials of the vaccine. The HBV attack rates in these groups was more than 20% per year and it was possible to demonstrate the effectiveness and safety of the HBV vaccine in a very short time. Follow-up collections of blood were required over the next several years, years which spanned the time of origin (1979, 1980) of the HIV epidemic. After the discovery of HIV, the sera could be used to identify persons who had already been infected with HIV and follow them prospectively to determine outcome. This study provided some of the most detailed information on prognosis in this higly susceptible group and is the cohort that has been studied longest in respect to the outcome of HIV infection. It was found that there were almost no cases of AIDS during the first 2 years after infection. After 8 years about 40% had developed AIDS and about the same number had developed symptoms indicating they would continue on to clinical AIDS. Using epidemiologic models, it is estimated that there is a high probability that in 13 years all of the infected cohort will develop AIDS.

This group of male homosexual volunteers for the hepatitis vaccine trial also provided a wealth of information on the demography, sociology and behaviour of the population at high risk for HIV. They were exceptionally well educated, falling well above the national levels. Data collection was focused on sexual behaviour, the number of partners, the forms of sexuality, substance abuse and related information. Survey data of this kind has subsequently been difficult to obtain in some high risk groups after the onset of the AIDS epidemic. Recently, a survey of serological prevalence of HIV and of risk behaviours planned by the Center for Disease Control in several cities could not be completed because the populations feared stigmatization. Also, the groups to be surveyed were concerned that ongoing research would delay the onset of treatment programs. The ear-



lier information using the serum collected for the hepatitis vaccine study may therefore provide one of the few well designed studies of infection-related behaviours, on sera prevalence and on the outcomes of infection

Vaccines

It is interesting and possibly useful to consider the history of the development of vaccine against HBV and compare it to the attempts, so far unsuccessful, to develop a vaccine against HIV.

It is likely that more is known about the molecular biology of HIV than of any other human virus. However, knowledge of the mechanism by which it interacts with its hosts is less well understood. In contrast, the means for producing an effective and safe vaccine for protection against infection with HBV became known before anything was known of its molecular biology. We can trace the sequence of events which resulted in the HBV vaccine and search out the biological difference which could account for the failure, so far, to develop a vaccine effective against HIV.

HBV was discovered in a manner unique in the history of virus discovery. Using the relatively insensitive double diffusion in agar gel technique, a precipitating antibody was found in the serum of a transfused patient which reacted with the surface coat (HBsAg) of HBV found in the serum of a carrier. It was soon learned that there were massive numbers of particles containing only surface antigen in the serum of asymptomatic carriers in addition to a smaller number of complete virus particles. Large population surveys for HBsAg (which marks the presence of whole virus and/or the surface antigen particles) and the antibody against it, (anti-HBs) were completed in 1966. There were few examples in which a person had both HBsAg and anti-HBs at the same time. This was consistent with the interpretation that anti-HBs was protective against infection. There was an additional body of evidence also consistent with a protective value for anti-HBs. Okochi and his colleagues in Tokyo found that transfused patients who had anti-HBs before transfusion or who developed anti-HBs afterwards were much less likely to become infected with HBV than those who had not. We proposed (in 1969) that a vaccine could be prepared from the surface antigen particles which were so numerous in the carriers. By the early 1980's successful field trials were completed and the vaccine is now widely used, particularly in Asia, where in some countries (for example, People's Republic of China, Taiwan, Korea) all or nearly all infants are vaccinated. It has proven to be a very effective vaccine and, so far, without evidence of toxic side effects. It was fortunate that anti-HBs, the first antibody known, was protective; this considerably eased the invention and testing process. A successful vaccine, therefore, was conceived with remarkably little known about the intimate details of virology and molecular biology. At present HBV vaccine is also produced by recombinant technology and the product is as safe and effective as that made from human blood. The supply of vaccine is now unlimited but this has not, as yet, brought down its price.

Unfortunately this simple sequence of events has not occurred for HIV. Antibodies to various parts of the virus were detected in people who were infected and/or suffering from AIDS or related diseases. This was, in general, inconsistent with protective capability for these antibodies. A fundamental problem, of course, is that HIV attacks the very cells which are required to provide an immune response. However, there is now detailed knowledge of the HIV gnome and the products of its many reading frames. This will allow a full imaginative scope for the development of protective and even therapeutic vaccines and vaccine-like materials. For example, the 3'ORF and R reading frame products are not necessary for replication. From this and other data it has been inferred that their role might be to inhibit replication, presumably to allow the cells to be chronically infected and, thereby provide a longer period during the lifetime of the carrier during which infectious spread con occur. It has been suggested that removal of these genes might lead to



rapid viral replication with a concomitant brisk immune response. It seems unlikely, however, that a vaccine designed on such principles could be used in human trials. There have been a number of other ingenious vaccines proposed based on the detailed knowledge of molecular biology. Ongoing trials will reveal if these result in a practical vaccine.

Treatment

The knowledge of molecular biology has also increased the possibility of rational drug design, that is, the design of a chemical structure which can undo the mischief wrought by the virus. For example, AZT inhibits the reverse transcriptase, thereby inhibiting replications DDI and related compounds also inhibit reverse transcriptase and may be used alternatively with AZT since their toxicities are different. Treatments based on the knowledge that HIV binds to the CD4 protein of target cells have also been proposed. These include the novel idea that CD4 can be administered to the patient as a treatment or as a preventative to high risk persons, and compete with the virus for the binding sites, thereby diminishing the rate of infection and/or intercellular spread. The broad range of knowledge of the possible chains or networks of pathogenesis will undoubtedly continue to recommend additional schemes for the development of therapy

In addition to the epidemiologic similarities of HBV and HIV, they also share molecular and virologic characteristics. HBV has a reverse transcriptase similar to those found in retroviruses. Hence any therapies which inhibit HIV by inhibition of reverse transcriptase should also be considered for the treatment of HBV as well. Infection with infectious agents which become resistant to conventional therapy is most often the cause of death in AIDS. As already noted, many groups are at high risk for both HBV and HIV, and many patients become exposed to both. Could infection with one virus affect subsequent infection with another or with pathogenesis and outcome? There is evidence that HBV carriers also infected with HIV respond less well to treatment. At the molecular level, in tissue culture studies, it has been found that the X gene of HBV can transactivate genes of HIV, suggesting that there may be a significant interaction in co-infected patients, and that this may affect pathogenesis, outcome and treatment. Studies on the interaction between HIV and other microorganisms which have infected the same host could provide new insights, derived from basic microbiological and immunologic research which can increase the understanding of this deadly infection.

BARUC S. BLUMBERG*
Fox Chase Cancer Center Philadelphia, USA



On the Nature of the AIDS Virus*

PROFESSOR ROBERT GALLO

I would like to begin by expressing my thanks to Mgr. Angelini for inviting me. I am glad to be here and I feel very privileged to be with this group. I think he should be congratulated on the innovativeness of this kind of meeting, bringing together people from so many different walks of life, of high calibre, with a common interest, and I think he should be congratulated for his courage in having a meeting focused on a problem with the ethical dimensions that AIDS creates.

I would like to make a comment about Cardinal O'Connor's talk. I personally found his talk very moving and very eloquent, very poignant, but I also found his talk personally upsetting. First of all, with his personal stories of the suffering of people, he reminds the scientist that despite our pride in rapid success in the early years of the AIDS epidemic, in fact there has been plenty of failure. Secondly, I found his talk upsetting because he said words I have not heard in such a long time. Thirdly, he said that many scientists and public health officials avoid the ethical questions, the moral issues, because they say they are scientists, and I certainly am one who has done exactly that, and this makes me of course wonder if we have done right. And fourthly, he reminds me that my talk, in detail to some degree, certainly for this audience, about the virus, is reductionism. Maybe it will even seem trivial to many of you, but I believe that Cardinal O'Connor's talk avoids something critical. He speaks in pure tones and he has strong beliefs in an after-life. In this world we live in, not everyone believes in an after-life, and with that problem, it is difficult for many people to avoid utilitarianism, pragmatism, and all these other kinds of not totally fulfilling philosophies of late twentieth century man. Nonetheless, the problem remains.

I would now like to get into my topic, which is the nature of the AIDS virus, but before doing so I would like to borrow a theme from our friend Harold Temin in a presentation he made two years ago at the San Marino Conferences. He raised the question of whether there was anything really new about the AIDS epidemic, or haven't we really gone through things like this in the past, many times before. Many medical scientists around the 1970s were certainly not expecting a new epidemic, so we tend to think that AIDS is really new. We are finished with epidemic disease, we thought. It was over a half of a century since the last major epidemic, which was terribly fatal for so many people, the influenza epidemic of 1918/1919. Over fifty years is a long time. No epidemics of this profound nature. Combined with the fact of advances in viral technology, the development of antibiotics, the thinking in the medical scientific community was that epidemics of a serious nature are more or less problems for the less priviliged people of the world, not for the industrialised nations. This is not likely to occur again. But in fact a brief examination of medical history shows that there are periods much longer than fifty years in which epidemic diseases have disappeared only to reappear suddenly, without warning, and these were centuries ago without the advances in medical science. We could have one hundred, two hundred, three hundred years go by apparently without a serious epidemic, and there was no great medical progress at that time. So in this sense, it is not new to have a new epidemic after fifty years without one.

William O'Neill wrote in 1975, " Infectious disease, which antedated the emergence of human kind, will last as long as humanity itself and will surely remain, as it has been hitherto, one of the fundamental parameters and determinants of human history ." Even earlier Frederick Cartwright, an English physician, writing a wonderful small book, *Disease and History,* in his closing paragraph states: " Diseases have emerged from restricted areas in the past. They may emerge again, causing worldwide pandemic, against which modern medicine will not necessarily prevail. "

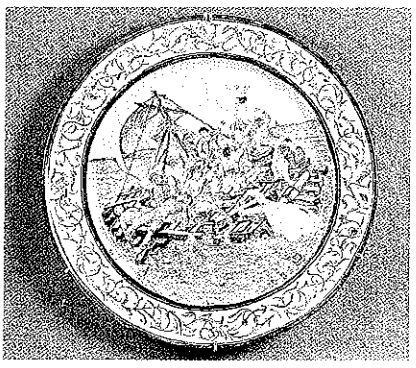
Well, now we have seen that epidemics can disappear and reappear after great periods of time have gone by, so in this sense, the AIDS epidemic is not new; we should have listened more to the words of those historians. But what about society's response to the AIDS epidemic? We tend to think we are in a unique position with all kinds of problems presented to us now. Manzoni — on writing of the plague of 1620 in Milan — says: " In the beginning, the people said there was no plague. The very word ' plague ' was forbidden. Next they talked about pestilent fever. The idea now was admitted indirectly, but not in a pure form. Then they said it was not a real pestilence — that is, it was a pestilence but only in a certain sense, not a true one but something for which it is difficult to find another name. Last, it became a true plague, without any doubt. But a new idea was attached to it. The idea of poisoning and witchcraft, and the corrupted and confused dissent conveyed by the dreaded word. " Manzoni then states: " I do not think that

it is necessary to be deeply versed in the history of words and ideas to see that many words and ideas follow a route that is similar to the one just described. Fortunately, however, there are not many words of a comparable type, not many of such importance or that win acceptance at such a price, or that have accessory ideas of such a kind tacked on to them, but in small and great matters alike, it would often be possible to avoid travelling the long and tortuous route if people would only follow a method which has been recommended to them long enough. The method of observing, listening, comparing, and thinking before talking. That is called today the scientific method. But talking, just talking, is so much more easy than any of the other activities mentioned, or all of them put together. " Now that was written 170 or 160 years ago, and by a man of literature, not a scientist, observing the plague of Milan a few centuries earlier than his time.

Now, we have seen, then, that even society's response to an epidemic, the way it has responded to AIDS, is roughly the same in the past. This is especially true if the disease is venereal, like syphilis and the response during World War II. There is usually, number one, fear, disbelief, and then an over-reaction. Number two, there follow innumerable theories, some of them crazy. They are followed, thirdly, by hostility and blame. Fourthly, by inadequate sympathy for the diseased and always by failure to understand the science, which in fact is not trivial.

Now let us see what is really unique about this epidemic. What is unique is one thing — the virus, the nature of this virus. But in discussing it I would paraphrase my colleague, Baruc Blumberg, in his comparison to some other viruses such as hepatitis virus. The AIDS virus is not as we are accustomed to think about viruses: being something we catch easily, we transmit for a day or two or three, it causes a little disease and then it goes away. Rather, it has certain special qualities; but it is not absolutely alone in these qualities, there are other viruses, several belonging to different groups that have become the most important viruses of late twentieth century man.

I have listed the properties of viruses of late twentieth century man of interest to us now. ' Us ' means not just me and my colleagues, but many of you, maybe all of you in this room. Number one, they are new, or at least newly discovered, relatively recent. They are often very difficult to find; that is, the scientist has difficulty in finding them, in isolating them, in proving they cause disease because they do not reproduce themselves very well, or they target very few cells in the body, or they reproduce themselves only for short periods in a given cell type. Consequently, they are often difficult to transmit. They may require transmission of what are called body fluids, like blood or semen. Number four, they take a very long time to cause disease. We are not used to thinking about diseases that take one year, five years, ten years, twenty years, to be produced, and some of these viruses take longer even than the AIDS virus to produce disease. A fifth very important point is they are present from the time of infection usually until death — lifelong infection, and during this time they might be able to be transmitted to others. This is certainly true of the AIDS virus. In fact, if you didn't know there was a virus present with *some* of these viruses, you would almost suspect a genetic disease; they take so long to occur and they are so tightly controlled, even infecting only within families sometimes.



A sixth point is that they often cause serious diseases, diseases of the brain and spinal cords, central nervous system disease, cancer, immune deficiency. A seventh common point is that they are increasingly important in late twentieth century people.

The examples: every retrovirus of man, some of the hepatitis causing viruses like the one that Professor Blumberg has pioneered research on and which he has just described, some of the papilloma viruses which can cause cancer of the cervix and of the genital regions, and in some respects some herpes viruses, although they are much more readily transmitted.

I am saying so far that what is unique about the AIDS epidemic is the nature of the virus, yet I told you there are many viruses that have some of these properties that are not unique to the AIDS virus, so we have to think of special properties of the AIDS virus and define it even better than we have so far.

One of the major properties of the AIDS virus is that it attacks the heart of the immune system. It predominantly infects a cell we call the T-cell, the T-helper, subtype of the T-cell. This cell is also called the T-4 lymphocyte, and finally it is also called the CD-4 positive T-cell; all these are the same thing. This is the heart of the immune system in that this cell regulates the function of much of the rest of the immune system, much like a navigator for a ship, a pilot. It regulates the making of antibodies. It regulates much of the other parts of the immune system and the AIDS virus is infecting exactly that cell, but once again, the AIDS virus is not absolutely alone in this property of infecting the T-4 lymphocyte or the CD-4 positive T-cell.

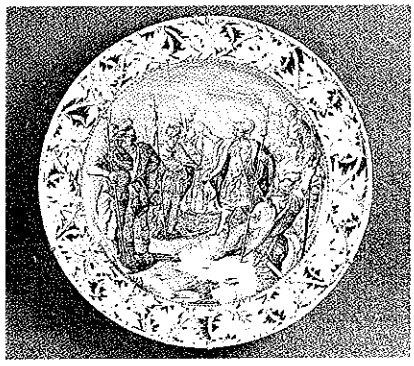
Here is a picture of the AIDS virus, HIV-1 in its relative, which Professor Montagnier will speak on in more detail I think, HIV-2, but also targeting this critical cell of the immune system is a newly discovered herpes virus found just a few years ago in our laboratory, called HHV-6, and the earliest known human retroviruses,

HTV-1 and HTV-2; actually all of these viruses came out of research only in the past decade from our respective laboratories, that of Doctor Montagnier and his colleagues and my Laboratory and coworkers, so we have only known about these viruses that attack the T-4 lymphocyte within the past decade, and we know about them because immunologists have defined this critical cell of the immune system only within these past ten or fifteen years, and because we discovered how to grow this kind of cell in the laboratory with a molecule we call interleukin 2, or IL-2, only about thirteen years ago, and because we have better techniques for finding viruses even when they are not present in very large quantity.

So all these viruses target the heart of the immune system, but therefore we have to go into more detail. The AIDS virus, really HIV-1, is, as you know, a retrovirus, but the earlier viruses, the HTLVs are also retroviruses. What do they have about them, since we knew about them several years earlier, what did we learn from them that was helpful about the AIDS virus?

There are some common properties of HIVs with the human leukaemia causing retroviruses, by the way which can also cause neurologic disease. In addition to the fact that they are all retroviruses in humans, their manner of transmission appears to be identical. They are transmitted by blood, they are transmitted by sex, and they are transmitted by mother to child, especially in milk. It has been known for some time for HTLVs, and we would predict the same for the HIVs. The other common property we have just referred to is that they target the critical cell of the immune system, the T-4 lymphocyte. A fourth property that they have in common is that when these viruses infect, like any retrovirus, they insert their genetic information into the chromosomal DNA of the whole cell. We call this integration. This means that the cell is infected forever, and the daughter cells of the infected cell are infected because the viral genes are transmitted with the cellular genes during the phase of the duplication of the DNA during cell division, or during the S-phase, the synthetic phase for DNA synthesis. So all the daughter cells of the original infected cell will harbour the viral genes. This means that infection is for the life of the infected animal or person. But in common with the HTLVs and different from some of the animal retroviruses, the integrated, or DNA, form of the AIDS virus, known as the provirus, is very tightly controlled. What this means is that when a cell is infected, and the DNA form integrates into the chromosome, there is no virus expression. There has to be some triggering of the T-cell, some activation before the virus comes out and the way this happens, we think, from scientific studies in the lab, is by immunological activation of the T-cell by other infections, so we think this has critical implications. If a persona infected with HIV gets infected chronically by other agents, their T-cells will be more likely to be activated, they will express more virus, and virus will be spread to other cells.

There is a final common property. The closest relative of the human leukaemia causing retroviruses is monkey virus from monkeys, in Africa, not found in the American monkeys for example. The closest relatives of the AIDS retroviruses are also monkey viruses found particulary in some parts of Sub-Saharan Africa. Those are some of the common properties of the human retroviruses.



Now let's look at the genetic information of the human leukaemia virus, the HTLVs.

Scientists will show you the genes of a virus just with a straight line, and you read just as you read a book, at least in the western world — most of it — this way. Animal retroviruses were known to have just three genes — gag, pol, env. These genes make the proteins of the virus, the structure of the virus. At the ends are regions called LTR, which we will not talk about; they are regulatory sequences. So the animal retroviruses have these three genes that make the structure of the virus. With the discovery of the human leukaemia virus, new genes were found. They are present at this end. They are known as tax and rex. It has been discovered in the last few years, and before work with AIDS virus, that these extra genes are necessary for the regulation and for the actual replication of the human leukaemia-causing retroviruses. Without them, the virus cannot reproduce itself. Without them the virus cannot cause leukaemia and they work in some special, and for retroviruses, unique way. Now I will summarize the replication cycle of the human leukaemia viruses, HTLV-1, HTLV-2. I divide the replication cycle into the incoming phase for the virus and the outgoing phase. Let me be brief and almost schematic.

Virus comes into the cell first by finding on the surface of the cell a molecule that the virus can bind to. We call that the receptor for the virus. No one knows what this is for the human leukaemia viruses. Strangely enough, we know what it is for the AIDS virus. It is a molecule that gives the name to the T-4 cell, the CD-4 molecule itself. But, in any case, when there is binding to the receptor, then the inner part of the virus, we call it the core, is emptied into the cytoplasm of the cell. Now comes the critical step. The virus genetic-information in RNA is converted into DNA; the DNA travels to the nucleus of the cell and now integrates into the chromosomal DNA of the cell. At this point, with the human retrovirus, infection of a T-4 helper lymphocyte, there is a stop, so that the immune system can

no longer see virus and cannot attack the cell because the virus is integrated into its genetic information; there are no virus particles; there is not even virus protein — the cell just has the viral DNA. This is one of the escape mechanisms for all the human retroviruses: they have a silent stage of infection. When there are the proper signals, or triggers, then the virus is expressed. The DNA form can be converted back again to the viral RNA by special processes in the nucleus of the cell, and the viral RNA makes viral proteins and all of these things assemble at the cell membrane, and the virus is released to complete the life cycle. The regulatory genes make the regulatory proteins Tax and Rex. These proteins, were essential for replication of these viruses, and they work at this level, and we have no time to say how However, they were critical lessons for what happened with HIV, because the AIDS virus also has extra genes and two critical ones are analogous to these two genes and they function with analogous mechanisms.

It is time now to turn full attention to the AIDS virus.

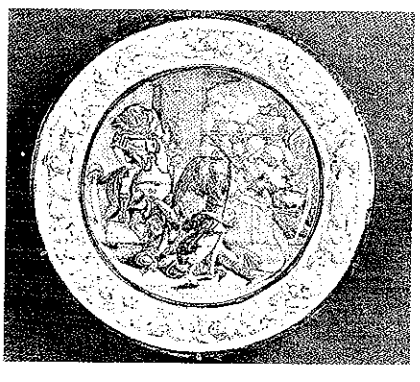
I would describe the disease AIDS as being divided into four different aspects, independent one from another, and causing confusion in the minds of people who do not have insights into the nature the virus The first is the immune deficiency; this is really the heart of the problem. With the immune deficiency that the virus induces, one develops the opportunistic infection. This means microbes that normally do not cause disease in healthy people will cause disease in a person whose immune deficiency is increasingly impaired. The best example, of course, is the pneumocystis problem.

Completely independently, the virus also affects the brain. It destroys certain cells of the brain, or it modifies their behaviour so that they release certain molecules we call cytokins, that are toxic in local environments when they should not be there.

Entirely separate from this, the virus can induce abnormal cell growth, certain types of cancers like B-cell lymphoma, and something that is known as Kaposi sarcoma, that I will mention in my closing remarks, which in its early stage is not a real cancer but can progress to become one in the full sense of the word. The virus does its induction of cancer, or cancer-like tumours, only buy complicated indirect mechanisms which we are now beginning to understand.

Lastly, I would like to refer briefly to miscellaneous associated diseases. These are due to independent infections because of lifestyle, or because of immune impairment, or because of both. This means that there is a greater incidence of infection with truly pathogenic microbes, microbes that would cause disease even in very healthy people — tuberculosis, hepatitis viruses, papilloma viruses, herpes viruses, the HTLVs and so on.

In my remaining minutes, I would like to discuss mainly how the immune deficiency occurs and what we are trying to do about it and a little bit about the Kaposi sarcoma. The chief event is the attack on cells that have these molecules on their surface. The CD-4 molecules are present on the surface of the critical cell of the immune system, the T-4 lymphocyte, we have discussed that. These molecules are also present on the surface of another cell that is important, critically, to the immune system, the macrophage, and in all virology we have never known of a virus whose envelope will bind with such extraordinary affinity to a molecule on the surface of the cell. The affinity between the envelope, known as GP-120, of HIV, and this molecule, CD-4, is even greater than the affinity between most antigene antibody reactions, so this virus has a means, with small numbers, of finding its way straight to the heart of the immune system. It has a landing device, or a docking mechanism, if you will coming right towards the centre of the immune system.



We must now turn a little bit for just a second, to the genetic information that this virus contains before we see other important features about the AIDS virus. Once again I show you the straight line and each of these bars is a gene of the AIDS virus. You will see that like the animal retroviruses, it has the three genes, gag, pol and env Like the human leukaemia viruses it has two extra genes that are functioning, similar to those extra genes in the leukaemia viruses. Here we call them Tat and Rev, but, in addition, the AIDS virus still has several more genes in the same general region whose function is yet to be understood, but we can say that they are not required for the virus to reproduce itself. We do not know why or where — why the virus has the genes and where it got them from. There is almost a blank, not even a hypothesis, about the questions of where it acquired these genes. We can only say once again that all these other extra genes are not necessary for the virus to replicate and that the scientific community is trying to understand what the virus is doing with them But Tat and Rev we know are absolutely essential.

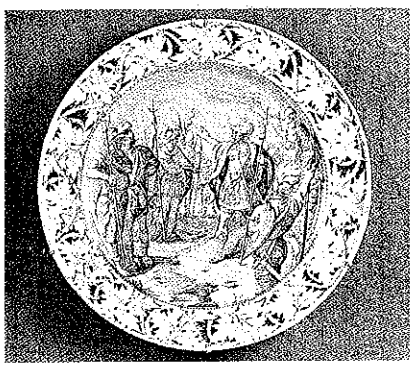
We now come to the life cycle of HIV, and it parallels the cycle the HTLVs in important respects. Phase one, the attachment. This time we know the molecule, the CD-4 molecule. Then the penetration. The RNA conversion to DNA and, if it is a T-cell, the integration of the DNA into the host chromosomal DNA. Like the HTLVs, there is a stop at this point, so that the infection is silent or latent. So the immune system cannot see the infected cell because there is no virus

expressed, there are no viral proteins expressed. When the T-cell is immune stimulated, then the viral genes become active and form virus, just like the HTLVs. In the nucleus we see that the Tat gene and the Rev gene are essential for these important processes to occur, and that is analagous to Tax and Rex of the HTLVs.

Now let's turn to what happens when a T-4 critical, helper lymphocyte is infected by HIV and the cell is stimulated so that the virus is expressed. Let's say the person gets infected by the AIDS virus and the T-cell is immune stimulated later in life by another infection. Zagury did a careful study of the time sequences of the events that occur when a T-cell is immune stimulated after it has been infected, and here you see the burst of virus release occurring very quickly. When this occurs in high enough amounts, the cell dies. This proves something unique about the AIDS virus, different from all the other viruses we talked about, so now we come to what is really unique about the AIDS virus. It doesn't just infect the heart of the immune system, it can destroy it. There is a direct mechanism of killing the T-4 lymphocyte following immune activation. The other retroviruses, the HTLVs, when they infect the T-cell, may slightly modify the T-cell function, but not kill it. Occasionally, rarely, they convert that cell to a cancer cell, to a leukaemic cell, but the AIDS virus doesn't waste any time fooling around. It kills its target T-cell when the cell is activated.

There is another way — and many ways, actually — that the AIDS virus leads to destruction of the immune system. We cannot go through all these mechanisms, but I would like to mention just quickly two more. The AIDS virus can also induce the formation of giant multi-nucleated cells. What this means is that when the virus is forming on the surface of the cell, before the virus comes out, the envelope, the GP-120 we talked about earlier, can, if there is a new bi-cell, bind to the CD-4 molecule of a nearby cell which is unaffected, and cause the two cells to fuse into one, and it can do that again and again, so you create these giant cells which are functionless and which prematurely die. Another bad effect of the AIDS virus.

I mentioned to you that there are many other mechanisms that are being learned of how this virus can cause immune problems. Luc Montagnier will go into some of these, I believe, in his talk, which follows. I will mention one last point.





A herpes virus called HHV-6 was found just a few years ago. We now know that this virus also kills T-4 helper lymphocytes but most of the people in this room are infected by this virus and have no problems with it. However, we suspect strongly that with immune impairment with AIDS this virus may replicate more out of control and may contribute to the T-4 cell killing which occurs as AIDS develops.

Now I turn to the final two ways of how the AIDS virus escapes the immune system. One way the virus can escape the host immune system is to be variable, this means that in infected individual there are many minor variants of the same strain of the virus. Let me make that a little clearer if I can. If we isolate this virus from two or three different people, the virus will not be identical among those two of three people. Let's call those " - strains of the virus, " but we have learned in the past few years that even one person with one virus strain, will have minor variations in the virus and those minor variations turn out to be important; even if it is one amidoacid in the envelope, it can be critical. At the beginning the antibody response may block the dominant virus, but later, minor variants may dominate, which the neutralizing antibody is no longer able to handle. Then you build up neutralizing antibodies to this one, but then another one comes forward, and another, and so on. This is likely to be the major way that the virus is escaping from the immune system.

There is still another mechanism that escapes from the immune system, and this is infection of the brain. Not only is infection of the brain harmful in giving dementia or thinking disorders, but the immune system cannot find virus when it is in the brain. Earlier, I told you that other than the T-4 helper lymphocyte, the AIDS virus infects macrophages because it too has CD-4 molecules on its surface. There are cells which are relatives to macrophages that exist in the brain. They are called microglial cells, and O'Lesky in New Jersey showed that the microglial cells of the brain are expressing quite a bit of virus, and

this is the major target of the virus in the brain.

Now let me summarize the ways that this virus escapes the immune system. One: it integrates its DNA into chromosomal DNA and can remain silent or latent so there are no viral proteins or antigens that the immune system can recognize. It becomes hidden.

Two: the virus can vary, and the immune system catches some but not all at any period or time.

Three: in time the virus is destroying the very cells that are supposed to be protective against virus infection.

Four: the virus can hide within the brain, as well as in the cells in the latent form that I mentioned already.

My last point has to deal with Kaposi sarcoma. Kaposi sarcoma is an extremely interesting tumour because it occurs in epidemic form with HIV-1. Kaposi sarcoma is also interesting because sometimes it goes away on its own. This means early on it is not a true malignancy in most people's mind. This is what we believe. Later it can progress by continued probable mutations due to hyperproliferation, creating more chance for mistakes in the DNA, and become a true malignacy. Kaposi sarcoma is also interesting because the tumour mass is made of not one uniform cell type, like most human cancers. Rather, it is a mixture. A mixture of a proliferating mass of blood vessels, white blood cells, fibro-blast. What is the real tumour cell? Scientists believed for some time that it is a cell that is shaped like a spindle (therefore, the name spindle cell), but its origin was unknown. The Kaposi sarcoma can give skin lesions, internal organ metastases with blood vessels, proliferating white blood cells, fibroblasts.

Now, we were led to believe by epidemiologists, that there must be more than just HIV to explain this problem; there is probably another environmental event, maybe another virus. We looked for another virus. Of those that are already known we surveyed. They are not there, not in any way that can explain this problem. And so we decided to try to grow in the laboratory the spindle cell. This had not been done before. We found a growth factor that allows us to grow the spindle cell. We now have evidence of what this cell is. It looks as though it is derived from the wall of blood vessels, from the tissue known as the smooth muscle. When we studied these cells we found that they produce growth factors, we can collectively call cytokines. We can produce in the laboratory Kaposi sarcoma in animals. In other words, we can grow these cells now and these cells release molecules that when stuck into a mouse can create mouse Kaposi sarcoma in one week. This gives us our first laboratory model for the study of this tumour. It also tells us what molecules are responsible for the Kaposi sarcoma and opens up a laboratory system to study chemical inhibitors.

What I haven't told you is how we succeded in growing the spindle cell, and I'll tell you in one word. Strangely the growth of these cells is promoted and induced by one of the HIV regulatory genes, the Tat gene, so the Tat gene is not only regulating virus expression, it is a growth factor for these cells and this too is analogous to what we learned from the human leukaemia viruses because the regulatory gene there called Tax is not only necessary for the virus replication but is involved in promoting growth factor production in the development of the T-cell leukaemia. The Tat gene is actively secreted by infected human T-cells; this protein comes out and can work on smooth muscle cells to promote their growth as spindle cells; these cells, in turn, release growth factors that create Kaposi sarcoma. In Tat gene protein is released and can act on smooth muscle cells, perhaps making in time a genetic change; spindle cells are formed and make all the growth factors for blood vessels, for fibroblast, etc., that create the Kaposi sarcoma lesion.

I have left much bad news about the virus. I think there is some good news, and the good news is that out of the basic science of understanding of the replication cycle come ideas for therapy. The basic scientific studies of this virus, the tests of Dani Bolognesi, who is here, and particularly Samuel Broder and his coworker, Bob Yarchoan, lead into the first therapy we have that does something for AIDS. It is also from the basic understanding of Kaposi sarcoma that we are going to get rational inhibitors and be able to treat this tumour in time, and don't believe that a successful vaccine is not possible. It is very possible and to my mind, and, I think, to that of the scientists you will hear from later, extremely likely, and we would predict by 1992.

So, in addition to Cardinal O'Connor's beautiful words about life and love and theology and philosophy and support to people, we think that the scientific method will sooner or later — and we hope and we believe sooner than is often believed by some scientific circles — solve the problem.

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* This lecture was transcribed from a tape recording without having been reviewed by the author

AIDS and Social Problems *

PROFESSOR LUC MONTAGNIER

Your Eminence, Your Excellency, Mr Chairman, Ladies and Gentlemen:

I am taking the floor in my twofold capacity of Director of the Technical Centre for the Support of Cancer Research of the National Scientific Research Centre at Villejuif, and of President of the Association on Cancer Research, which is the most important European Association fighting against cancer.

The cold arithmetic of the World Health Organization gives us some idea of the extent of the misfortune which will be hitting Mankind by the end of this century. In fact, according to WHO, tens of thousands of men, women, and children will be carriers of the HIV virus by the year 2000. To refuse to read the worst in these numbers means failing to recognize the reality of an epidemic whose devastating effects in Africa are already apparent. On the basis of WHO statistics of a few months ago, the number of reported cases worldwide was 480,000 (however, since then this figure has risen to 600,000 ascertained cases). 270,000 of these were in Africa, that is to say, more than half the total number of cases out of a population equivalent to 10% of the world's inhabitants. Undoubtedly, in the history, at times impeded but encouraging, of the advances of science for progress, the working out of a vaccine or a treatment eliminating the AIDS virus is of special concern in the developing countries and in tropical areas. It is quite clear that well long, before the present, AIDS existed and we can suppose that, between 1960 and 1980, an unnoticed diffusion of AIDS virus did in effect take place through the two ways of main transmission.

In the northern regions of the planet, blood transmission techniques have been developed for medical use, yet there has also been a massive appearance and diffusion of intravenous drug abuse.

There have also been changes in sexual behavior which are probably an indirect consequence of medical progress with regard to hormonal contraception. As far as tropical regions are concerned, the transmission of virus is possible through blood and blood products as well as through the use of unsterilized needles or syringes. The very rapid evolution of the majority of tropical countries after decolonization, and changes in social structures have also brought about important changes in sexual behavior. The agent of the disease in question is now well known.

A remarkable property of the AIDS virus is its strong potential for genetic variation. This means that the AIDS virus isolated from one individual is different from the AIDS virus found in another.

This variability is even greater in Africa than in the northern countries of the planet, such as North America and Europe. In Africa, in fact two principal types of viruses exist: HIV1 and HIV2. The first is most likely responsible for the pandemia that can now be observed in tropical and equatorial areas of Africa, a result of the greater communication and therefore of mingling of people possible nowadays. The second virus, at the moment, is still localized in West Africa. It has been isolated in countries such as Guinea-Bissau, the Cabo Verde Isles, the Ivory Coast, Senegal. There is a trend towards its spreading to other African regions, through the same means.

This virus largely differs from the type 1 virus by more than 50% of its genetic sequences. Nevertheless, in spite of this enormous difference, the genetic structure, its genome, is relatively analoguous, and it brings about the same biological and pathological phenomena. As far as the biological phenomena are concerned it has the same trophism, the same affinity for CD-4 receptor, and it has a similar lythic destructive effect on its cells after infection. In vivo, it has the same pathological effects. It produces the same AIDS which has the same symptoms and it has a similar diffusion within the nervous system. Nevertheless, its global pathological power on an epidemiological scale is weaker and we still do not know why.

Perhaps this virus has adapted itself for a longer time to some African populations Or the incubation period is longer than that of the HIV1 virus.

What is clear, however, is that detailed study of the genetic structure, in spite of the evident structural analogy, reveals important differences which today allow us to affirm that the HIV1 virus and the HIV2 virus do not derive from one another but they have followed an independet parallel evolution.

Furthermore, in the case of HIV2 a specific gene, called VPX, not present in any case of HIV1 exists. But this gene is present in some viruses which have been isolated from African monkeys. If we make some genetic comparisons between the HIV2 virus and the monkey viruses, we can find a stronger similarity, much stronger than that existing between HIV1 and HIV2.

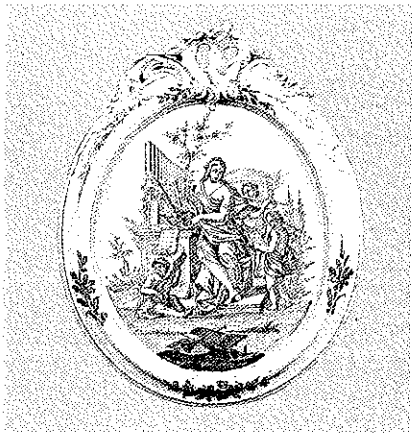
There are also some other similarities, which I will not insist

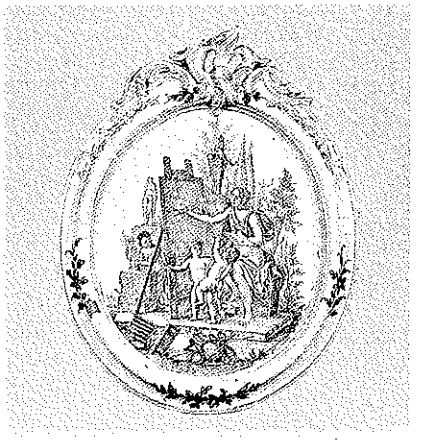
upon, at the level of the maturation of envelope proteins and their size, o the monkey virus. If we want to find a phylogenetic tree starting from the more preserved sequences, that is, from the inverse transcriptase gene or from the polymerases of these viruses, we obtain a schematic tree which indicates that the human virus HIV2 has probably derived from an African monkey virus, that is the virus of Mangabey of West Africa. Another virus is also present in Africa Serological studies, in fact, have showed that many green monkeys have been infected by this virus. In any case, if we look at the genetic sequences of this virus, we find that they are relatively different from Mangabey virus cells as well as from HIV2 and HIV1 viruses. This last virus at the moment has not been isolated in higher primates.

Nevertheless, some preliminary results from the De Laparte group, actually in press, show that two chimpanzees appear to be infected by this type of virus, apparently without having been in contact with human beings. This virus is now being characterized, but we can already say that these sequences are similar to those of HIV1 cells and other cells of this family group. If all this is verified, there is also, in the case of HIV1, a close representative in the African primates. These are the facts.

Let us now examine the hypotheses.

There are two main hypotheses: one is that all these viruses have evolved with the species, with the differentiation of the primate species, therefore, long ago. The other hypothesis is that there have been some accidental passages of these viruses from one species to another starting from the chimpanzee in the case of HIV1 and starting from the virus MIV of Mangabey monkeys in the case of HIV2. This hypothesis is strengthened by the observation that in fact the first MIV virus of this family was isolated from some macacos, monkeys of Asian origin brought to United States, and probably through an injection of Mangabey virus from a Mangabey monkey to these macacos. Either the same virus or, in any case, a virus very similar to Mangabey causes a disease very similar to human AIDS in the macacao. In fact, the macaco and this virus are presently the best models at our disposal for studying not only the pathogenesis but also the vaccine and the therapeutic treatments against human AIDS.





The virus did exist in primates in Africa, and it is fairly normal that the African man in contact with primates could get infected either through bites or through physical proximity, since these monkeys frequently lived as pets within some African villages.

Other viral diseases have the same pattern. For example, yellow fever also exists in a hidden state in some African monkeys, without the disease manifesting itself; while this virus is lethal for man. Furthermore, this hypothesis is important in that it enables us to understand, at least partially, the pathogenesis.

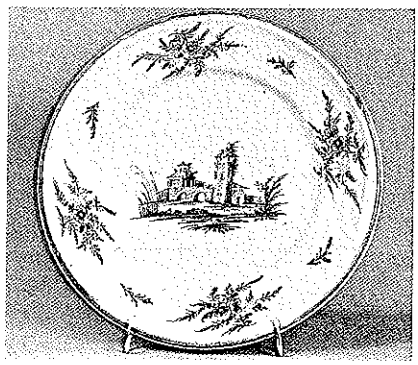
How does the virus induce the disease? This is still today very mysterious Nevertheless, we have some important observations. First of all is the fact that the same virus can either induce a disease or be well tolerated, depending on the host species. This is remarkable since these viruses have the same trophism and infect the cells, the lymphocytes CD-4 and the monocytes in the same way. For example, high values of the virus can be found in the plasma of Mangabey monkeys which, nevertheless, are not sick. This is probably due to the long adaptational period between the parasite and its host, and the disease actually represents the breakdown of a biological equilibrium. According to this hypothesis, human AIDS would be the rupture of a biological equilibrium, due to the accidental passage to a human being of a virus belonging to another primate species to which the human is no longer able to adapt. This could explain the pathogenetic power but it does not explain the epidemic that can be observed in humans. It is clear that some of these passages occured through the years on several occasions, without causing epidemics, at least in the historical periods.

We cannot exclude that, in a faraway past, some human populations might have already been decimated in this way by the same virus. What is clear, however, is that as far as the present AIDS phenomenon is concerned, the epidemics are linked to changes in human conditions I previously mentioned, and we are now observing a mingling of people as well as of parasites on a planetary scale.

Furthermore, our civilization utilizes some medical tools, like blood transfusion, which have saved millions of human lives, but which also allow the passage of some agents — and the AIDS virus may not be the last one — that can cause very serious illnesses and can pass undetected for a long period of time because of their long incubation period and because they are not usually observed by physicians.

I would like now to return to the pathogenetic mechanism, which must be understood in order to obtain same rational treatments against AIDS Of course, it is not possible to exclude — and there are many examples in the past history of medicine — that there are some discoveries and some empirical clues that can lead to great medical progress against the disease. Nevertheless, we, scientists and physicians, must have a methodological, rational approach to the comprehension of the illness and at its treatment. As already stated by prof. Gallo, the first stage of the infection is the interaction of the particles which are on the surface of the virus with the CD-4 receptor of lymphocytes and monocytes, the white blood cells extremely important for immune defenses. This condition is necessary but not sufficient to induce the disease, as is true with other viruses of primates. Another constant, that is, the immune reactions induced by the virus's proteins, does exist. Therefore, the virus is not totally invisible to the immune system whenever imprinted. On the contrary, it induces a relatively strong immune response, which may be one of the factors explaining the long incubation period of the illness.

This classical scheme indicates the relationship between the presence of the virus and the immune responses against the virus during the period after the infection. The disease can be distinguished in three phases: primary infection, the long period of incubation and invasion, and the final diffusion of the virus, which is, unfortunately at the present, irreversible. At the onset the virus is introduced into the blood, either through an injection or sexual contact. It is important to notice that the passage of the virus into the blood does not occur through an effraction, for example, through a lesion of the genital mucosa. The contact itself between genital mucous membranes enables the virus to pass. In fact, in such mucosas there exist some cells that may already contain the genetic information of the virus since some lymphocytes and monocytes are always found in these mucosas. After this first infection phase, which lasts a few weeks, the organism starts reacting by producing interpheron and other complex mechanisms called cell immunity. Cells which will kill the infected cells whenever they recognize some viral proteins on the surface are produced. At the same time or when viral proteins are located within the cythoplasm these cells act through a complex mechanism of antigen decomposition into multiple pieces. Therefore, the immune system produces antibodies against its own cells. A complex interaction takes place where the T4 cells play the role of orchestra director. This contibutes to the formation of a cellular and humoral immunity through the secretion of specific antibodies against the principle proteins of the virus. What is remarkable with regard to antibodies against the envelope proteins is the persistence of these antibodies practically to the end of the disease. On the contrary, some antibodies of the internal proteins of the virus, the antigene P24-P25, frequently disappear at the final stage of the illness. It may be argued that this disappearance represents a negative signal for the evolution of the disease and it probably reflects a sort of adaptation of the immune system of the organism to certain viral antigens which flood more or less the entire immune system. What is also remarkable is that not only do the structural proteins of viral particles (which are present therefore within either the infected cells or within these viral particles) induce some antibodies, but at the same the regulation proteins, as stated by Professor Gallo, Tat-Rev, and also a third protein which seems to have the role of a negative regulator, can all induce antibodies themselves and contribute to the latency period of the virus. In spite of all this, the virus persists. The number of cells infected during this period, after the immune response, is relatively small. Probably the virus is not expressed in all the cells and probably some variants that are less visible to the immune system appear This is why the virus persists and it produces a remarkably progressive derangement of the immune system that is, up to now, very poorly understood. In fact, it is during this period in which the virus presence is minimal that the greatest damage that will lead to immunodepression is produced.



During the third phase of invasion, there is a real immunodepression of the system and it is at this point that the virus can replicate itself progressively more quickly It must be kept in mind that the persons with AIDS are much more infective at this stage, and have many more infective particles in their body fluids than the infected persons in the asymptomatic phase. Nevertheless they are less contagious because, during this phase, they have fewer sexual contacts.

Moreover, during this period, not only lymphocytes but also some cells of monocyte type are infected. What is again remarkable is that the viral particles liy within the macrophage close to the surface while the macrophage is itself in good health.

Some researchers think that this

macrophage can be used as a virus reservoir during that phase of silent incubation. During this period, when the immune system is breaking down, the number of lymphocytes showing CD4 receptors is an important marker of the phase itself.

The first effects of the infection are produced on CD4 positive lymphocytes. Of course, there are also a number of other negative effects on the immune system, in particular at the level of monocytes and lymphocytes β, which also secrete antibodies. Consequently, the problem is now to explain how this deterioration of CD4 positive cells occurs. The number of cells really infected in this period is relatively small. And furthermore, since all infected cells will be destroyed by the virus, the number is really small and the organism could compensate.

If we look at a lymphocyte culture being activated by the virus, we observe in the final phase the disappearance of virus production along with the death of cells. If we look carefully through the microscope we can see some important destructive effects in these cultures. These effects are visible not only on infected cells but also on uninfected cells through the merging of numerous cells, named policariocytes, also mentioned by Prof. Gallo. Naturally, the adhesion of noninfected cells to the infected ones can contribute to the disappearance of CD4 cells originally not infected. This phenomenon, which is easily seen through the microscope, may not be so relevant in vivo, because of the relatively small number of infected cells, one out of 10 thousand or one hundred thousand cells. Consequently, other mechanisms capable of amplifying the destructive effect of the virus must be called upon. Nevertheless, a strong correlation in monkey models between the pathogeneticity and the destructive power of the virus on cell cultures does exist. In order to explain the progressive disappearance together with the fluctuation in the number of T4 lymphocytes, which are twice as important as other T cells, we need to hypothesize some other indirect mechanisms through which the immune system destroys its own cells. We can think of some autoimmune mechanisms that amplify the viral action starting from infected cells which themselves produce some proteins with devastating effects on other cells. We can also suppose that the surface protein of the virus, when free in blood circulation, can be fixed on CD4 lymphocytes, causing their disappearance in a indirect way.

Here we are now at the present. I think that the present research on AIDS is extremely active and that an interdisciplinary approach among clinicians, immunologists, virologists, epidemiologists and molecular biologists is necessary. This cooperation will undoubtedly lead to a better comprehension of the mechanisms underlying the disease and therefore to adequate therapeutical strategies. At the present moment prevention and prevention policy are still absolutely necessary. It is regretful, however, that there are a number of countries in the world in which economic and organizational reasons do not permit careful blood screening in order to avoid the viral passage through transfusions. It is also important to continue educational campaigns which can be made in different ways. I think we should not exclude medical tools, like condoms and spermicides that can prevent the transmission of the virus, as previously done for other sexually transmitted diseases. But I also agree that medical tools are not sufficient. It is very important to make campaigns against sexual activity which is against man's biological nature. It is important to educate the younger generations to be aware of the risks of sexual promiscuity. As far as medicine is concerned, some important progress for the prevention of opportunist infections has already been made and perhaps soon such progress will be made for Kaposi sarcoma and other cancers that characterize the disease. Antiviral therapies have been started with AZT and DDI. These therapies have shown their efficacy, but also their limits, as will be discussed in detail in other chapters. What is important is to realize that these therapies are more effective in the early phases of the infection, before the clinical manifestations begin, before the flooding of the virus in the organism, when immune defenses still exist. This is why I would like to propose treating all seropositives and all infected individuals in the same manner. We still do not have the ideal treatment; we still do not have the answer. We still do not know what the best therapeutic combination will be. It will probably be a combination between an anti-viral agent, with low toxicity, therefore tolerated in long term treatment and some other treatments which are able to increase immune defenses in the organism. We already have in our hands some limitedly toxic products. What I should like to propose is that all seropositive individuals be included in clinical trials with respect of ethical and scientific rules. The clinical trial should compare one treatment combination with another treatment combination and not with a placebo, which is no longer acceptable.



This new phase of intensive, well-oriented clinical trials in my opinion will lead in a reasonable time to the discovery of a treatment capable of preventing the seropositive individual from becoming ill. This is a first stage. We can then hope, with vaccine or some medications capable of increasing immune responses to, if not eradicate, at least keep the infection invisible in the seropositive. This is the

second stage. Along with these stages prevention campaigns should also be intensified because people will be infected and infections will last for a very long time. Consequently, the educational campaign must continue even if a medical solution of the AIDS problems is found.

I think that even if the AIDS problem, and epidemics of the end of the twentieth century are solved, we need to learn something from this new disease. It is very possible that other germs presently silent could became responsible for the origin of the third millenium disease. This is why scientists and physicians should be particularly careful.

Furthermore, man should also have behavior similar to his biological characteristics, which I think, traditional cultures and ethics have given to him. I would also like to close with a reflection: there is only one world and the question is not whether we can treat only a few individuals who can materially afford to be treated. It is celar that we cannot treat this disease in one part of the world and let it spread in another. We need a world policy which permits medical treatment worldwide, especially in the poorer regions of the planet. I think that we cannot survive only in parts but human civilization will survive altogether.

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Pasteur Institute, Paris, France

* This lecture was transcribed from a tape recording without having been reviewed by the author



AIDS: The Nature of the Virus*

PROF. ARSÈNE BURNY

I will stick to a few comments on some peculiar aspects of the AIDS problem and I will try to show how science is facing it in an attempt to overcome it.

If it has been possible to write a book such as *Life and Death of Infectious Diseases*, this means that infectious diseases live with human beings. This is the way it has always been and will always be.

I do not particularly believe that the appearance of an infectious disease is linked to specific human behaviour. I believe that what must be kept in mind is the fact that man is an organism reproducing himself at a very slow pace in a world where other organisms, generally much smaller than he is, have reproductive capacities extraordinarily more developed.

All this means that man cannot survive in this world unless provided with very efficient immune defenses. He lives in a world of infectious diseases. If agents of infectious diseases happen to multiply inside the human immune system, the human being becomes very sensitive and a privileged target.

Very schematically, we can say that the AIDS virus carries internationally some genetic material packed in a structure called a nucleoid which is the major reaction site of the immune system.

Another peculiar aspect of this virus is that it is completely covered by an envelope made of a layer of proteins which are macromolecules composed of fatty acids and sugars.

It is through these molecules that the virus is able to recognize its target.

Let us see how we could use this peculiarity to fight the virus. According to my colleague Azeltin in Boston, there are a few possibilities for the development of the virus. Let us see the first one.

For a period between three to six weeks a protein is produced, and some viral proteins circulate in the blood stream of infected individuals.

According to Azeltin, a phase follows lasting from 2 to 10 years, in which viral production is apparently very weak, and I insist on the word apparently. During all this period there is an evolution in the interaction between the virus and the infected person. The end of this period varies from one individual to another and, most likely, from one group of virus to another. Therefore, the length of the disease is highly variable. At the end of this phase in which the individual has been fighting the infection, the fight between the virus and the individual materializes with the relatively high number of antibodies in the blood stream of the infected person.

When the disease really begins, important clinical features appear. At the same time there is a high production of viral particles. Consequently, it is fundamental to understand what a viral particle is, how the virus replicates, and how an enveloped virus interacts with the attacked cell. This is precisely what we are trying to penetrate.

The virus enters the cell, replicates itself, and leaves. At the end of this period of interaction, the viral production becomes very important.

These viruses are retroviruses. They have a gene coding for internal proteins, a gene coding for the multiplying enzyme, and a region coding for their envelope. This is all very simple and basic. The rest is very complicated. Robert Gallo mentioned the leukaemia virus he has discovered. We also have been working with very similar viruses which induce leukemia in ruminants. In these cases once the cell has become cancerous, the virus no longer expresses itself although it still resides within the cell.

Consequently, this property of nonexpression is not a peculiarity of AIDS virus. We need to look somewhere else to understand its further complexity.

It is possible, although this is only an hypothesis, that the high complexity of the AIDS virus enables it to re-express itself while hidden in the same cell and further possible that this is a capacity belonging only to it. On the other hand, I also would like to draw your attention to the fact that such complex viruses have at least three possibilities to use genetic information, and all three are in fact used. What does this mean? It means that the AIDS virus or viruses cannot have been organized recently and are most certainly not newcomers in the animal world. It is clear that we are dealing with organisms, disease agents which have undoubtedly been living with primates, perhaps with man and with other animals for a long time. This is the first point: the virus is not something new. Evolution is a slow process and since the AIDS virus uses all the possibilities allowed by nucleic acid, the virus cannot be something new to the animal world. The biological mechanisms of evolution could not have built such complex entities in only ten years.

Secondly, I would like to draw your attention to the complexity of nucleic acid regions which are recognised by specific proteins. The regulation of the expression of the virus is a complex mechanism. This is important to understand and we have tried to

understand it further. After considering this complexity and reading the papers of colleagues working on virus regulation, we have realized that there are some key regions which are crucial and can be suppressed without blocking the virus from replicating itself. At this point we asked ourselves if in the information material of the virus there were some regions capable of playing this role, and we found a gene called POL coding for the replication enzyme and another region which is activated whenever the cell in which the virus resides is activated.

The virus is equipped to respond to the activation of the cell not only because of the classic ruling sequences of these retroviruses, but also because within the genetic material of the virus there is a region which responds to the cell activation.

Once again this means that we are dealing with old structures, with organisms that have been evolving for hundreds of thousands of years with animals. Cell activation is the result of the presence of a molecule against which the organism defends itself by producing an antigen.

The presence of a few thousand molecules of the activator enables the virus to replicate itself very rapidly. If an analogue of this molecule which is not an activator is used, the virus does not replicate. The region which has been discovered in the very centre of genetic material of the virus perfectly responds to all known activators of the cell.

I would like to explain to you now what happens in nature when we use insect cells instead of mammal cells. First there is a very pronounced thickening of the cell membrane and then a particle is produced by the cell. It is possible to produce large quantities of these particles in insect cells, which is the advantage of using this system. We can separate the proteins deriving from insect cells infected by the virus and we can find the protein which is the precursor of a specific genetic material of the virus. Insect cells normally do not produce these particles. Within two days after having been infected their surface is covered with viral particles. There are some tubes on the surface and viral particles appear at the end of these tubes. What is the aim of these studies? If it is possible to produce some particles, it is also possible to understand what is happening.





Patricia Fulls, in the USA, showed that animals can be perfectly protected against a viral particle which is toxic for its cells if they are carriers of a nontoxic particle. If it were possible to build nontoxic viruses, we could make an important step if not the final one. And this is what we are trying to do.

It is also interesting to see how a virus with an envelope can pass through the lipidic milieu of a cell. Those who are fairly acquainted with chemistry are well aware that modern chemistry knows a lot about water soluble molecules and very little about non-water-soluble molecules. Now a virus enters a cell by disorganizing the lipid layer, which is made up of non-water-soluble molecules. On the surface of viral particles there is a whole series of triangles. Some of these triangles are the envelope proteins of the virus which may well allow us to recognize what Robert Gallo and Luc Montagnier have called CD4 sites. If we look at the virus with sufficiently powerful tools, it is possible to see these triangles. It is through them that the virus can recognize its target. The object of our study is to find out if we can interfere between the virus and CD4 interaction.

We can distinguish two different proteins in the envelope, one called 120 and a second called 41.

The sequence of protein 120 is relatively constant and it interacts with the extremity of protein 41. This interaction occurs on all three sides of the triangle. It is the end part of protein 41 which enters the lipidic layer, thus permitting infection which will lead to death. The end of protein 41 shows differently oriented angles. An angle oriented at 45 degrees, is the one employed by most pathogenetic viruses, those which kill most rapidly. In a slow killing virus the angle is very small.

The internal production of proteins and how the virus enters the cell are studied in order to try to develop a vaccine.

Robert Gallo and his collaborators formed the AIVEC group, an international group which is trying to speed up the process of preparing an efficacious prevention therapy for the illness. At the moment we have eight animals which have been vaccinated with products obtained through genetic engineering. These eight animals are protected from a lethal in-

fection with a dose of infected cells. What is used to infect them, I insist on this point, are infected cells; that is, the same condition in which animals and humans are infected by AIDS is reproduced. Eight animals have been treated; seven have been protected while only one has not. The only animal which has been infected was the one in which few neutralizing antibodies were produced. The other animals had levels as high as 350, 6100, 90, etc. Ninety is sufficient while 5 is insufficient to offer protection Consequently, we cannot affirm that neutralizing antibodies are the complete answer to the problem. What we can say is that when the animals have a sufficiently high number of neutralizing antibodies it means that they have reacted well and perhaps have elaborated a sufficient immune response thanks to neutralizing antibodies and perhaps to many other unknown factors.

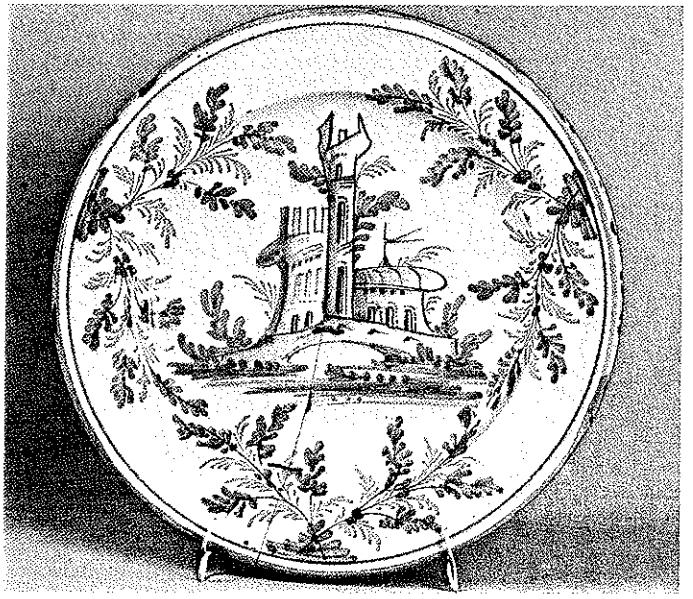
If it is possible to produce the particles that I have mentioned, it is possible to understand the infection mechanism and very likely that we shall win the battle against such complex viruses as those of AIDS.

These are old viruses; they have evolved with animals and perhaps also with man for many years, and they have chosen the right moment to spread in the world.

As Luc Montagnier and many other authors say, infectious diseases are born and die, yet scientists and physicians must not wait for evolution to win the battle against them. It is their task to find not only the necessary funds but also the intellectual and material tools necessary to understand nature more and more every day and to suppress whatever is harmful to humankind.

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* This lecture was transcribed from a tape recording without having been reviewed by the author.



The International Epidemiology of AIDS

PROFESSOR JONATHAN M. MANN

During the 1970s, the human immunodeficiency virus (HIV) began to spread, silently and unnoticed, around the world.

Therefore, at the time AIDS was first recognized, in 1981 in the United States, HIV infections were also present on four other continents.

The discovery of HIV in 1983 and the widespread availability of HIV antibody testing in early 1985 led rapidly to recognition of the global scope of HIV infection and stimulated a worldwide and unprecedented response to prevent and control AIDS.

The decade of the 1970s was silent; we are approaching the end of the 1980s, which were so marked by AIDS; and we look towards the 1990s. In this presentation, I would like to summarize the current status of the international epidemiology of HIV infection an AIDS, then consider projections for the 1990s.

As of 1 October 1989, a cumulative total of 182,463 cases of AIDS from 152 countries were reported officially to the World Health Organization. Of countries reporting AIDS cases, 48 are in Africa, 43 in the Americas, 32 in Asia and Oceania, and 29 in Europe. However, many AIDS cases are not officially reported. Completeness of reporting may exceed 80% in some industrialized countries and may be less than 10% in some developing countries. Therefore, the WHO estimate of the actual cumulative number of AIDS cases worldwide is approximately 600,000, or more than three times more than the official total.

However, as AIDS cases develop years after HIV infection, it is the epidemiology of HIV infection which provides a clearer picture of the current status of the pandemic.

In 1987, WHO estimated that between five and ten million people were infected with HIV. Since that time, improved and more extensive data have become available; the global estimate is now focused near the midpoint of the previous estimate, at 6-8 million HIV-infected persons.

A review of the current global distribution of HIV infection and AIDS leads to three major observations.

First, the modes of HIV transmission have been unchanged and there is no evidence that HIV is spreading through any new or unusual routes. Worldwide, HIV transmission is fundamentally the same, and limited to sexual intercourse, exposure to blood, and spread from infected mother to foetus and infant.

Second, the international distribution of HIV infection is highly variable. WHO has identified three, and now four, distinctive epidemiological patterns. These patterns are all based on the same fundamental modes of HIV transmission, but reflect principally differences in the temporal spread of HIV and variations in personal and social behaviour patterns among different populations.

Pattern I countries include the United States, Canada, Western Europe, Australia and New Zealand. Extensive spread of HIV in these areas probably began in the late 1970s and early 1980s, principally among homosexual men and self-injecting drug users. In pattern I countries, sexual transmission of HIV remains predominantly homosexual, although heterosexual transmission occurs and is increasing. Overall, the male to female ratio is about 10:1 and at the end of the 1980s the total number of HIV- infected persons in pattern I countries was estimated to be at least two million.

Within pattern I areas, the relative proportion of homosexual men to self-injecting drug users varies widely. For example, in northern Europe, 75-90% of reported cases have occurred among homosexual men, while in southern Europe, particularly in a band extending through Yugoslavia, Italy, southern France and Spain, self-injecting drug users have accounted for the majority of AIDS cases to date. Similar geographical differences have also been noted when comparing the eastern and west coasts of the United States.

Among certain groups of homosexual men and urban self-injecting drug users in pattern I countries, HIV incidence has been shown to decline during the mid-to-late 1980s. However, many persons continue to practice behaviours which place them at high risk of HIV infection. For example, large segments of the self-injecting drug user population in the United States have remained uninfected, despite needle-sharing behaviours. In addition, in some pattern I areas, HIV infection continues to increase in socially and economically vulnerable segments of society. Finally, as a consequence of the increase in HIV-infected self-injecting drug users, the male-to-female sex ratio of infections will decrease and the number of HIV infections among children will rise.

Pattern II areas include most of sub-Saharan Africa and certain areas of the Caribbean. HIV trasmission in these areas remains predominantly

heterosexual and perinatal, although transfusions with unscreened blood and injections using unsterile equipment also contribute to the burden of HIV infection. In pattern II areas, the prevalence of HIV infection continues to increase, with over 3 million people now estimated to be infected.

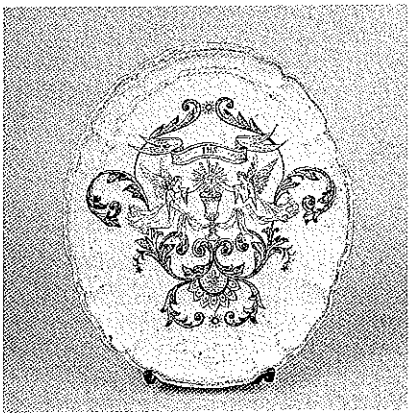
As in pattern I areas, the distribution of HIV infection in pattern II countries is highly variable and some countries continue to be relatively unaffected by the pandemic. Thus, approximately two-thirds of the HIV-1 infections in pattern II countries have occurred in nine countries in Central and Eastern Africa, which together represent only one-sixth of the total sub-Saharan population.

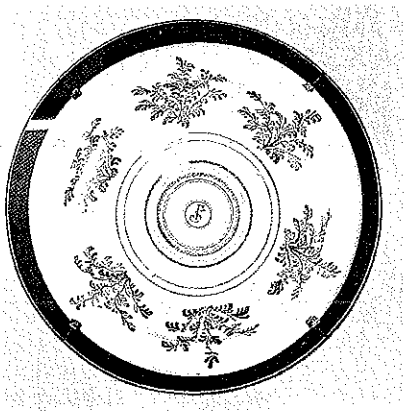
Nevertheless, the incidence of HIV infection continues to rise throughout pattern II areas. For example, HIV seroprevalence among pregnant women attending antenatal clinics in Lilongwe, Malawi increased from about 3% in 1986 to about 18% in 1989. Among adults in Bangui, Central African Republic, HIV seroprevalence increased from approximately 2% in 1985 to about 7% in 1989. In Abidjan, Ivory Coast, HIV-1 seroprevalence among adults rose from 1% in 1986 to at least 4% in 1988.

In pattern II areas, the majority of the population is rural. In general, rural areas have been less affected by the pandemic than urban areas. However, important exceptions exist; for example, preliminary data from a community-based survey in the rural part of Uganda's central region found an HIV seroprevalence among adults of about 12 percent.

The nearly equal overall distribution of HIV infection among women and men in pattern II countries has ominous significance for children. A meta-analysis of available seroprevalence data from sub-Saharan Africa suggests that during the 1980s, a cumulative total of nearly 150,000 infants will have been perinatally infected with HIV. The contribution of HIV to infant and child mortality in pattern II areas is likely to be substantial.

Recently, a new pattern, called I/II, has emerged in the Caribbean and Latin America. Many countries in these areas would have been classified as pattern I during the early 1980s, yet have experienced an increase in heterosexual transmission during the mid-to-late 1980s which is typical of pattern II. Therefore, the male/female ratio for HIV infection in some of these countries is rapidly approaching unity.





Finally, pattern III areas include North Africa, the Middle East, eastern Europe and most countries in Asia and Oceania. HIV was apparently not introduced into pattern III areas until the early to mid 1980s. Thus far, pattern III AIDS cases represent only about one percent of the global total. While indigenous spread of HIV is now documented in many pattern III countries, the prevalence of HIV infection remains generally low at the end of the 1980s and no mode of transmission appears predominant. However, the situation in pattern III countries is inherently unstable and rapid change may occur, as recently documented in Thailand.

The third major observation arising from review of the global distribution of HIV infection and AIDS is the dynamic nature of the pandemic. While examples of populations in which HIV incidence has declined illustrate the potential for behaviour change and associated reduction of transmission, the global picture at the end of the 1980s remains dominated by evidence of increasing incidence and geographical extension of the pandemic. Wherever behaviours which permit HIV transmission persist, they create a vulnerability for individual HIV infection and a potential for smouldering or explosive HIV spread. One important illustration of this general problem involves the linkage between the dynamic global epidemic of drug injection with the HIV/AIDS pandemic. Thus, as cocaine injection practices spread in Latin America, as drug injection becomes a more common method for drug users in parts of eastern Europe and Asia, and as different forms of cocaine use become entwined with patterns of injection and sexual behaviour in North America, the social vulnerability to epidemic HIV transmission will enlarge. Yet another striking example is Myanmar, formerly called Burma, where in early 1989 HIV infections were detected among self-injecting drug users in treatment facilities in Rangoon.

Therefore, during the 1980s, the number of HIV infected people increased from approximately 100,000 to at least 6 million and an estimated

600,000 AIDS cases occurred, with at least 300,000 deaths.

Two projections and forecasts can be developed for the 1990s. The first uses estimates of the number of HIV infections which have already occurred in order to project the number of people who may develop AIDS during the early 1990s. If the progression from HIV infection to AIDS remains unchanged for most of the world's population of HIV-infected persons during the next few years, an estimated additional 500,000 people may develop AIDS during 1990 and 1991 alone.

A longer-term projection requires an estimate of the number of new HIV infections which will occur during the period of interest. In situations where little or no data are (or can be) available, the Delphi method has been used to systematically collect and analyse expert judgements. In early 1989, WHO carried out such a Delphi study to estimate the number of new HIV infections worldwide during the 1990s.

The Delphi estimates were based on a conservative assumption that only 5 million adults were already HIV infected and a cautious assumption that no effective vaccine or treatment would be widely available during the coming decade.

The Delphi study predicted that two to three times more HIV infections would occur during the 1990s compared with the 1980s. This estimate was then applied to an AIDS forecasting model, which projected that approximately nine times more adults would develop AIDS during the 1990s, compared with the 1980s. About half of those people developing AIDS during the 1990s would already have been infected with HIV during the 1980s. In this scenario, the annual number of new adult AIDS cases would increase sharply, from fewer than 100,000 new cases during 1988, to approximately 350,000 in 1995 and over 500,000 in the year 2000.

During the 1980s, the impact of HIV and AIDS on health and social systems has been extraordinary. Yet the decade of the 1990s may be more difficult, and perhaps much more difficult than the 1980s. Along with dramatic increases in the number of HIV infected persons and people with AIDS, the social, cultural, economic and political challenge to communities, nations and the international community will also intensify during the 1990s.

Yet the decade of the 1980s has seen much more than further spread of the human immunodeficiency virus. Starting in 1985, when the global dimensions and impact of HIV and AIDS were realized, an extraordinary and unprecedented mobilization has occurred in response to the pandemic. During the period 1985-89, the World Health Organization, which was created precisely to coordinate and direct international health work, created a global AIDS strategy, initiated global action, and promoted global solidarity in the face of the pandemic and its common threats.

The Global AIDS Strategy is the world's first truly global strategy to prevent and control an infectious disease. For while smallpox eradication was also global, the problem was already geographically limited when the eradication campaign started. Yet HIV infection is a growing threat to industrialized and developing countries in all areas of the world. The Global AIDS Strategy is also, not surprisingly, the first strategy to have been debated and discussed by the United Nations General Assembly. The UN General Assembly approved the strategy and resolved to coordinate the actions of its many agencies through WHO.

During the period 1986-89, the strategy has been transformed into action. In contrast with only three years ago, national AIDS programmes now exist in virtually all countries. These programmes differ in many ways, as they are adapted to the local social, cultural, economic, political and epidemiological situations, but they share common lineage and form. At the international level, a coordinated effort has brought resources to the support of national AIDS programmes throughout the developing world. Many organizations, at the local, national and international levels, previously unaware of the importance and impact of HIV/AIDS, are now making their contributions to the common effort. Worldwide, the arduous work of AIDS prevention and control has been started, notwithstanding inevitable gaps and delays, in record time.

In addition to a global strategy and global action, a spirit of global solidarity has arisen in the face of AIDS. This solidarity makes AIDS one of a small number of issues, such as the protection of the environment and the prevention of nuclear war, which are deeply and widely felt to be global concerns.

On all levels, HIV and AIDS have challenged the *status quo*. For in every society which is struggling with AIDS and its prevention, certain complex, pre-existing and extremely difficult issues have been highlighted and certain imbalances, deficiencies and inequities in existing health and social systems have become evident. Therefore, in confronting AIDS, societies have been forced to ask if the *status quo* is good enough, in education of youth, in care of the sick, in support for the rights and dignity of all people.

The international epidemiology of AIDS is itself a mosaic, comprised of an extraordinarily complex and large number of national, local, and ultimately individual pieces. These constituent elements are as dynamic and changeable as human behaviour, individual and collective, personal and institutional. The future of HIV infection and AIDS, and of the social, cultural, economic and political reaction and response to the HIV/AIDS pandemic, must also be seen as personal, national and global. Today, perhaps more than at any time in the world's history, people are developing an awareness which is at the same time personal, national and universal. The future of AIDS, and the world's future, may depend upon the wisdom of this vision, at once particular and global, of humanity and solidarity.

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Epidemiologic Considerations on AIDS

PROFESSOR WILLIAM BLATTNER

Introduction

It is not usual for me to begin a scientific talk by focusing on Sacred Scripture, but this is not the usual scientific forum. It is my hope that this unique interface between the scientific and ecclesial communities can result in a bridging of our efforts to confront AIDS and the underlying medical, ethical and moral crisis that it represents. In the Book of Numbers, chapter 21, the people of Israel experienced a plague of venomous snakes. The people asked Moses for a sign of God's healing. God instructed Moses to construct a bronze serpent on a standard (much like the caduceus symbol of physicians) that those bitten might recover.

Alluding to this Old Testament story, in the Book of John, chapter 3, Nicodemus, a Pharisee, is told by Jesus, "that this son of man...must be lifted up as the serpent was lifted up by Moses in the wilderness so that everyone who has faith might possess eternal life" Nicodemus is further instructed about the power of the Holy Spirit to transform men's life and the need to eschew judgmental attitudes. In these and many other scriptures we are reminded of God's compassion for each of us, and this message has special meaning as we, as scientific, medical and church leaders meet to seek a deeper understanding of AIDS.

This presentation focuses on the pattern and spread of the epidemic, the relationship between HIV infection and AIDS, how the virus of AIDS is transmitted and the future magnitude and implications of the epidemic.

Origins and Status of the HIV Epidemic

The underlying cause of the acquired immunodeficiency syndrome AIDS is the human immunodeficiency virus (HIV), discovered by Professors Robert C. Gallo and Luc Montagnieur. The key attributes of the virus from an epidemiologic perspective are the nature of the target cell of infection, which determines the nature of the resulting immunologic and neurologic disease, and the fact that the virus integrates into the genetic material of the host cell resulting in a life-long infection. Thus, once a person is infected he or she is forever infected.

No one knows exactly where the HIV virus originated or how it first came to be spread. However, in the United States evidence for the new emergence of HIV positivity began in the mid-to late 1970's Rates of seropositivity rose rapidly and achieved very high levels, in some groups over 50% by the early 1980's. Among sexually active homosexual men in New York and San Francisco HIV seropositivity rose rapidly in the early 1980's with almost simultaneous epidemics. In areas away from these epicenters of infection increases in seroprevalence occurred later in calendar time. Among parenteral intravenous drug abusers similar patterns were observed with high rates in New York simultaneous with those in homosexual men. More recent rises in seroprevalence occurred in drug abusers away from this epicenter including centers in Europe. This theme of centripetal spread of virus continues, as discussed by Dr. Jonathan Mann in documenting the spread, of virus worldwide. Hemophiliacs present a different pattern of HIV spread with a more uniform sequence of exposures taking place almost simultaneously and synchronously in different parts of the world, as the virus was introduced into these populations through infectious units of factor VIII concentrate produced centrally, each batch requiring thousands of donors and distributed to treat hemophiliacs worldwide.

The epidemic of HIV and AIDS infection affects persons in the sexually active age group between the ages of 20 and 45 in the U.S. and this pattern is mirrored worldwide. In the United States males are disproportionately infected because of the large proportion of exposures attributable to homosexual contact and intravenous drug abuse. An increasing number of cases attributable to heterosexual exposure, mimicking the pattern observed in some areas of the developing world, are emerging in some areas of the United States.

Dr. Philip Rosenberg, a statistician from the National Cancer Institute, has applied a complex method called back-calculation to estimate the number of persons infected with HIV His estimations document that the number of infected individuals is disproportionately high among Blacks and Hispanics Thus the rate of HIV infection among Blacks and Hispanics on a population basis is over 2 times higher than in Whites. Among infected Whites the male to female ratio is 9 to 1 while in Blacks the male to female ration is 3.5 to 1 and in

Hispanics the ratio is 8.5 to 1. Recent estimates put the total number of persons infected in the United States at 1 million or more with recent new infections disproportionately involving persons from disadvantaged and minority backgrounds.

Progression of HIV to AIDS

The HIV virus is unusual because of the time between infection and subsequent development of disease. Data from the International Seroconversion Registry document the time that it takes a person to go from infection to clinical AIDS if no treatment is given. In one analysis the rate of development of AIDS among populations of homosexual men infected before or after 1985 were compared. The time to development of AIDS has remained constant over the last decade, whether the person was infected before or after 1985. This suggests that there has not been a detectable change in the time to AIDS from HIV exposure to disease during this decade.

In a comparision of the time to AIDS for adult homosexual men, adult hemophiliacs and adolescent hemophiliacs the rate of AIDS development is similar between homosexual men and older hemophiliacs and, with the exclusion of Kaposi sarcoma (which predominates in homosexual men) are virtually indistinguishable. Younger hemophiliacs have a less aggressive time to development of AIDS. The reasons for this less aggressive course among adolescent hemophiliacs may reflect differences in the immune reserves of younger persons. Furthermore, adolescents seem to be more tolerant of a more severe level of immune deficiency than are adults. Thus the time to progression of AIDS in younger adolescent hemophiliacs with low CD4 counts is longer than in adults with an identical level of CD4 cells. The reasons are not fully understood, but may relate to differences in the resilience of the adolescent immune system or differences in the rate of exposure to potential opportunistic agents.

Modes of HIV Transmission

Summarized in Table 1 is information derived from various epidemiologic studies which document the major routes of HIV infection.

Worldwide, sexual transmission, male-to-female or female-to-male or male-to-male, accounts for the majority of HIV infections. In the heterosexual context, vaginal intercourse has been implicated while anal receptive intercourse appears to be a particularly efficient mode among homosexual men. Parenteral transmission involves transfusion of blood or blood products, IV drug abuse and rarely via accidental needle stick such as in the health care setting and via reuse of contaminated needles, as occurs in some areas of the world which lack access to disposable needles or enough needles so that proper sterilization can be effected. Mother-to-child transmission is a growing problem as the number of HIV-infected women of child-bearing age increases. In the U.S. approximately one third of babies of infected mothers become infected, but breast milk transmission is uncommon since infected mothers are urged not to breast feed. In underdeveloped countries, where alternatives to breast-feeding are not readily available and often associated with high infant mortality due to diarrheal diseases, breast feeding may infect 20% or more of exposed infants, as suggested from one small study in Africa. Contact of infectious material such as blood with a mucous membrane or cutaneous contact, particularly with a break in the skin such as might take place in a health care setting, is exceedingly rare as a source of transmission, although occasional instances have been documented.

Epidemilogic studies have identified a number of cofactors as determinants of HIV infection. The sexual lifestyle of an individual is important.

Individuals who have large numbers of sexual partners or who themselves are not sexually active but have a promiscious or drug abusing partner are at increased risk. Drug abusers who share needles and more recently crack cocaine users, who may be more sexually active because of their drug abuse, also appear at increased risk of HIV infection. Traumatic sexual practices, the occurrence of other sexually transmitted diseases, and host susceptibility factors have also been implicated in promoting HIV transmission. Sexually transmitted diseases which result in ulcerative genital le-

Table 1: *Determinants of HIV Infection*

I. Route
- *A. Sexual*
  - 1) Male-to-female, female-to-male, and male-to-male
- *B. Parenteral*
  - 1) Transfusion
  - 2) IV Drug Abuse
  - 3) Needle stick
- *C. Mother-to-child*
- *D. Mucous Membrane/Cutaneous (rare)*

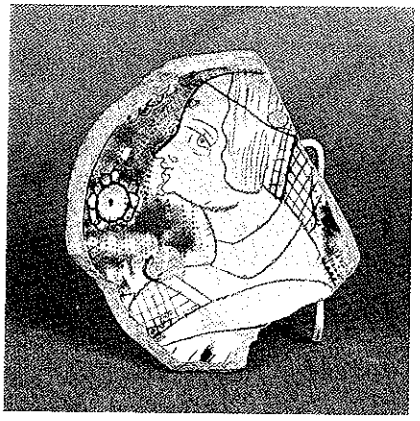
II. Cofactors
- *A. Lifestyle*
  - 1) Large number of sexual partners
  - 2) Sexually promiscious partner
  - 3) Drug abuse with needle sharing
  - 4) Crack cocaine abuse?
- *B. Traumatic sexual practice*
- *C. Coincident sexually transmitted diseases*
- *D. Host factors?*

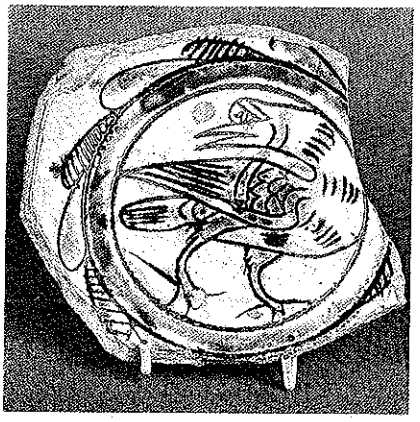
III. Infectivity
- *A. Virus strain*
- *B. Virus replication — antigenemia*
- *C. Immune status*
  - 1) CD4 count
  - 2) Immune response to virus

sions may contribute to further spread of HIV in some developing countries, where limitations of resources often mean that these readily controllable conditions go untreated.

The issue was recently addressed in a prospective cohort study of homosexual men in New York and Washington, DC. In the early days of the epidemic the number of different partners that gay men in the cohort reported per year was quite high, sometimes exceeding 40. There was a correlation between the number of partners per year and HIV seropositivity. However, even before the cause of the epidemic was proven to be an infectious agent, educational efforts in the gay community resulted in substantial behavioral changes, as reflected by a progressive decline in the number of partners among cohort members over time. These changes were obviously not influenced by knowledge of HIV status. Interview data collected in 1987 was evaluated to determine whether knowledge of HIV status influenced sexual behavior that would put one at continued risk of HIV infection. In 1987 between 80 to 90% of both HIV positive and negative individuals in the cohort continued to have an active sex life. An equal percentage of persons who knew their HIV status, whether it was positive or negative, continued to have significant numbers of sexual partners of unknown HIV status. Among sexual partners of known status there is a tendency to choose partners of concordant HIV status. However, there were 2 HIV positive individuals out of 13 who knowingly had sexual contact with HIV negative partners, sometimes without condoms. Conversely HIV negatives tended to seek out partners who were concordant for negativity although 4 out of 29 study subjects had contact with a known HIV positive. HIV negative individuals tended to experience receptive anal intercourse with their partner more often with a condom than HIV positive individuals. Thus, despite widely heralded successes in reducing sexual behaviors linked to HIV transmission, participants in this cohort continue to engage in risky sexual behaviors.

Other studies show that current patterns of sexual contact are predicted by prior behaviours, suggesting that, in the case of sexuality, behaviors are deeply ingrained and difficult to modify, despite the very real threat of HIV infection. These findings emphasize that behavior modification aimed at risk elimination, even among highly educated and highly motivated individuals, is a complex issue that requires sustained efforts to solve. The use of the HIV test as a preventive tool has potential as pointed out by these data, but reinforcement of risk elimination endeavors needs to be stressed.





The third widely publicized prevention strategy is condom usage.

The basis of this internationally promoted public health policy comes from the scientifically documented benefit of condoms for decreasing other sexually transmitted diseases. Secondly, laboratory scientists have documented the efficiency of latex condoms as a physical barrier against the HIV virus.

Furthermore, several small clinical studies of high risk groups and prostitutes have shown decreases in HIV transmission in condom users, but not the elimination of transmission. Finally, condoms are relatively inexpensive and often widely available, particularly in the developed countries of Western Europe, the United States and the Far East.

In a recent analysis, Peralman et al. mathematically modeled projected risk differences between condom users and nonusers based on contraceptive use data from the United States National Survey of Family Growth. This analysis showed an interesting relationship between the likelihood of annual condom failure rates as a function of the HIV incidence rate in the population. It was shown that annual condom-use failure rates resulting in HIV transmissions are quite low in populations where HIV prevalence is low, less than 1 in 100,000 for plausible relative risk ranges at an HIV incidence rate of 0,00002 per year. However, in the circumstance of a high HIV incidence rate (0,2 per year), such as where the sexual partner is known to be HIV positive, risks approaching the 10% annual condom-use failure rate reported for condoms as a means of birth control are approximated in some relative risk ranges. In this regard there is some risk among HIV positive partners, either heterosexual or homosexual, of transmitting the HIV virus to their uninfected partners even in the setting of condom use. These data support condom use as a preventive tool, ex-

cept where the partner is known to be HIV positive. An area for future research is to examine the benefits and the risks of condom use with regard to their effect on behaviors which place one at continued risk of HIV infection. This issue must be considered if elimination of risk is the goal of prevention.

In the United States, where drug abuse is a major component of the epidemic, as it is in Italy and other countries in Europe, the availability of drug abuse treatment has been argued as an effective way to intervene in the cycle of potential exposure to the virus. Another controversial area is the issue of needle exchange and needle availability in the drug abuse setting.

Scientific data on the efficacy of this approach is still not available.

Ultimately, the major goal of HIV prevention strategies is to bring about fundamental changes in behavior that eliminate risk of infection.





Future Course of the Epidemic

What is the future course of the AIDS epidemic? Published data from the United States Centers for Disease Control report that as of August 1989 in the United States over 100,000 individuals have been diagnosed with clinical AIDS. It is projected that by December 1992 the cumulative total will be 380,000 cases. This marked expansion of the case load over a relatively few years has the potential for significant impacts on the health care system and on society in general. Similar projections worldwide from Dr. Jonathan Mann point to a pandemic with potential for even greater social, moral, ethical and political dislocations.

There are recent data, however, based on statistical modeling approaches developed by Dr. Mitchell Gail from the National Cancer Institute from an unpublished manuscript that point to a more complex trend for AIDS in different risk groups in the United States. For example, among parenteral drug abusers in the United States, these models point to a continued unchecked rise in the number of AIDS cases.

However, among homosexual men beginning in 1987 there is a recent plateauing of new AIDS case numbers, compared to the expected projections. Based on estimates of the usage of the first anti-retroviral drug, AZT, during this time period this slowing of AIDS incidence may reflect the impact of therapy on the course of the epidemic. In addition to the hopeful message of an apparent positive benefit of therapy on the epidemic itself, these data also point out the uneven accessibility to treatment, particularly among the hard-hit disadvantaged populations of the United States.

Thus as the HIV epidemic increasingly affects minorities, the poor, the disenfranchised, the uneducated, the Third World and their children, we are challenged to translate the advances and discoveries that scientists are making to the under-served, hard-to-reach, and unprotected populations of the world.

Conclusion

In this presentation I have summarized epidemiologic data and some of the moral and ethical dilemmas that these data present for confronting AIDS. I would now like to conclude by returning to the scriptural focus of this presentation. In the first reading from the Book of Numbers, we are shown that through God's compassion there are solutions to the plagues which afflict man, including AIDS. It is my personal belief that the discoveries that we as scientists are allowed to make are in fact a gift from God. Each of the scientists and physicians present here and many more not present who are daily giving of themselves to confront the epidemic have been given special gifts for this just as Moses was gifted by God to lead and heal his people.

The church and the community of believers can contribute to this process in many ways, but especially through the power of prayer. It is a great source of comfort for me that my good friend and spiritual advisor, Monsignor Joaquin Bazan, a Washington Archdiocesan priest, prays daily for me and a few other scientists by name in our efforts to confront AIDS. We as a people should pray for the scientists, physicians and all who care for persons afflicted with AIDS for strength, courage, wisdom, insight, compassion and a spirit of cooperation and dedication that will allow us to be instruments of God's peace in conquering

this plague. In turn, as The Holy Father recently emphasized in an address at the Universityu of Pisa in honor of Galileo, the "people of science are called upon to practice their own special priesthood," one that calls them because of the power of the scientific method, "to make an honest and responsible use of their own ingenuity and of the great and small achievements which spring from it." In a word, we are called to serve mankind as our first objective.

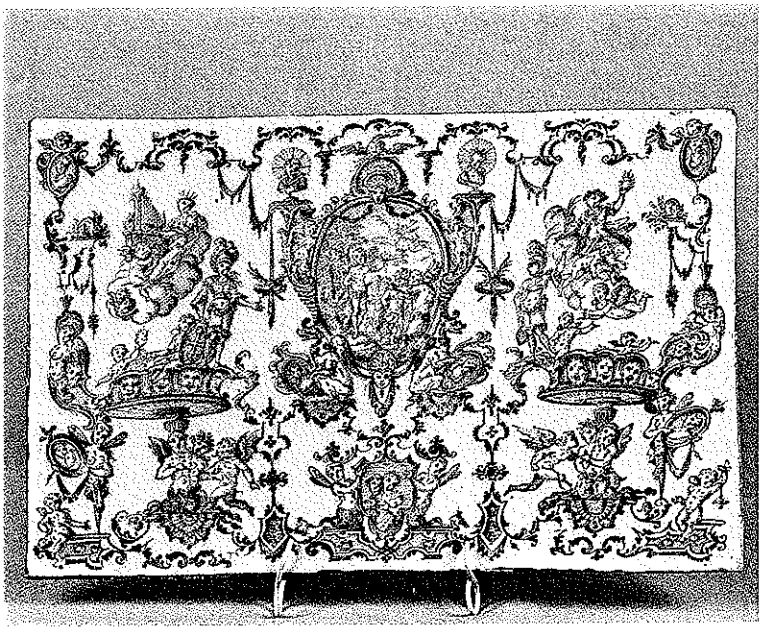
The Church, as revealed to Nicodemus in the 3rd Chapter of John, has many charisms to offer as we go forward in confronting AIDS. In an epidemic that has seen judgmental responses and discrimination we are called to personalize the plight of the afflicted. Father Jeffrey Defayette, another Washington Archdiocesan priest, in a recent homily shared stories of the AIDS quilt. By inviting some of his clients from Damean House, an inner-city Catholic-sponsored home for AIDS patients, to our well-to-do suburban parish, he challenged each member of our congregation to see the face of Christ in the patient with HIV infection. The peaceful death of a young man with AIDS reconciled with the church through the compassionate ministering of his parish priest reinforces the spiritual healing so many with HIV infection and AIDS are seeking and which is available through the sacraments.

The Church also has an important potential public health role in preventing AIDS. The Bible in some regards is a public health document that teaches behaviors which are healthful and will in fact prevent transmission of HIV. A mutually faithful, monogamous relationship, chastity before this relationship or in the setting of HIV positivity in one partner are important preventive approaches which are all too often rejected outright. Drug abuse has its roots in the exploitation and alienation of the individual. In this context the AIDS epidemic is a challenge to evangelization, which seeks to change hearts through the Spirit of God, who aided Moses and Nicodemus. Unlike other public health approaches, this evangelization results in the kind of sustained behavioral changes, through a rebirth of human dignity, that are the objective of our best preventive endeavors. Ultimately, the goal of prevention should be *risk elimination*, and this involves fundamental behavioral changes.

The AIDS epidemic is a symptom of a much larger problem in the moral fabric of our societies worldwide resulting in alienation of the individual and his or her exploitation. Social justice for the poor who increasingly are the victims of HIV is a fundamental issue. In New York City, for example, there are many women in need of adequate prenatal care that eliminates illicit drugs and which will help insure full-term deliveries resulting in fewer HIV-infected babies. Educational efforts targeted to those at greatest risk are needed in an environment where schools and social services are least adequate.

Strategies to transfer the therapeutic and vaccine discoveries of science to those without resources must be developed and funded. These are but a few of the moral, ethical and scientific challenges that lie ahead as individuals, institutions and governments join forces to confront AIDS.

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The Diagnostics of AIDS in the Experience of South Africa

PROFESSOR *RUBEN SHER*

South Africa is both a first and a third world country, with a total population of some 35,000,000 people of whom 26,496,625 are black, 4,949,000 are white, 3,127,000 are coloured (mixed races) and 928,000 are Asians. There are many different religious orientations, political affiliations, cultural norms and contrasting levels of education and literacy. Means of communication are complicated by the number of different languages spoken by these peoples. All these facts have contributed to problems experienced in diagnosing HIV infection and AIDS.

The diagnosis of HIV infection and AIDS is made in accordance with the regulations prescribed by the Centres for Disease Control, Atlanta. Screening for HIV-1 and HIV-2 is done by second generation (recombinant) Elisa tests. Positives are confirmed by a passive haemagglutination assay and or Western blotting. An antigen capture assay is also utilised in certain circumstances. Most of the HIV-1 positive patients are evaluated immunologically (T cell subsets, delayed hypersensitivity skin testing, serum immunoglobulins and B2-microglobulin). Opportunistic diseases and central nervous system involvement are diagnosed by laboratory expertise.

There are two main impediments to the diagnosis of HIV disease in South Africa and these are 1) political, in the form of "Apartheid" and its attending discrimination and 2) cultural differences.

Political impediment

HIV infection and disease in South Africa up to 1987 has been, except for a few blood transfusions related and haemophiliac cases, almost exclusively a white homosexual problem. These facts, together with the feeling that AIDS' originated in Western countries and as only whites travel to these countries, they were responsible for bringing HIV infection to South Africa, lead to AIDS becoming known as a "white man's disease". This generated a feeling of immunity against AIDS and hence a reluctance and resistance to be tested for HIV infection. With education and the increasing emergence of HIV infection and AIDS in black people, this notion is giving way to concern and cooperation in some black people. However there are still those who contend that AIDS in blacks is a government ploy. Because of "Apartheid" most things that the Government does are regarded with suspicion and thought to be motivated by political expediency. Furthermore, black people think they are not vulnerable to HIV infection because they do not come from areas where the prevalence is high and therefore there is no need for HIV testing.

The migrant labour system and the use of single sex hostels for workers result from economic and political aspects of apartheid. There are two types of migrant labourers, external and internal. External migrant labourers come from Malawi, Mozambique, Lesotho, Swaziland, Botswana and Zimbabwe. The reason for this is mainly economic. Internal migrant labourers come from several politically proclaimed black homelands within geographical South Africa. The rationale for this is mainly political. One of the main complaints about migrant labour is the single sex hostel accommodation. Deprived of normal sex partners, workers resort to alternative sexual partners and practices.

There is no medical evidence to suggest that there is either an increase in male homosexual practices or the presence of such practices in the hostels. There are many professional women around to satisfy the sexual needs of these men. The question of male prostitution is not established. Thigh or intracrural sex may well be practised. This form of sex is traditionally accepted premaritally and is a nonpenetrating sexual practice which rejoices in the name of "Ukusoma."

Migrant labour inevitably results in the breaking down of family structure and traditions and the adoption of prostitution and concubinage as a norm. Through fear of repatriation and loss of employment many people do not seek medical care at the workplace but rather visit doctors not associated with their employment. The number of those being treated for HIV infection by private doctors is minimal.

The repatriation of HIV infected migrant workers has created a false sense of security and endorsed the concept that the black population of South Africa is not at risk for HIV infection and has minimised the need for diagnostic procedures. As family planning clinics, strongly perceived as a white man's innovation to decrease the black birthrate, had failed, the white government resorted to the AIDS scare, which, according to blacks, does not exist.

If any benefit can be attributed to apartheid, viz a viz the black community, it has been the imposed separation and reduced contact between South African people and peoples to the north of South Africa, where the

prevalence of HIV infection is much higher. This was facilitated by the difficulties experienced by black South African people to obtain travel documents to visit other countries and the refusal of visas to other Africans wishing to visit South Africa.

On account of apartheid there has been no means of communication between blacks and whites, no dialogue or sharing of problems such as AIDS. Black people tend to deny its existence and themselves for diagnosis.

Because of conservative political doctrines, homosexuality and prostitution are illegal, and these people are reluctant and fearful to present themselves for HIV testing.

Cultural impediments

Traditional healers have long been the custodians of health in many African countries, including South Africa. Due to a lack of treatment of AIDS by Western establishments and the claim of traditional healers of being able to cure AIDS, many patients have sought the help of these healers and consequently do not go to hospitals for diagnosis. To overcome this impasse we have held a number of symposia with traditional healers in order that they may recognise the disease and refer patients for diagnosis to orthodox medical establishments. Patients are then referred back to the healers for further management, if so requested. Traditional healers have claimed that AIDS is not a new disease and that it has been in Africa for a long time and is well known to them. Furthermore, they claim that they can cure AIDS and therefore there is no need for orthodox medical diagnosis and treatment.

Amongst black people who are not Western orientated, the giving of blood is not accepted, as it is linked to witchcraft. The possession of someone's blood, regarded as the most important part of the body, renders the recipient capable of inflicting disease and evil influences on the donor.

The concept of the "germ theory" of disease does not exist in Africa. All diseases are brought about by the wrath of the ancestors and evil spirits cast by enemies. Treatment consists of placating the ancestors or driving out the evil spirits. These beliefs negate the necessity for routine diagnosis of HIV infection.

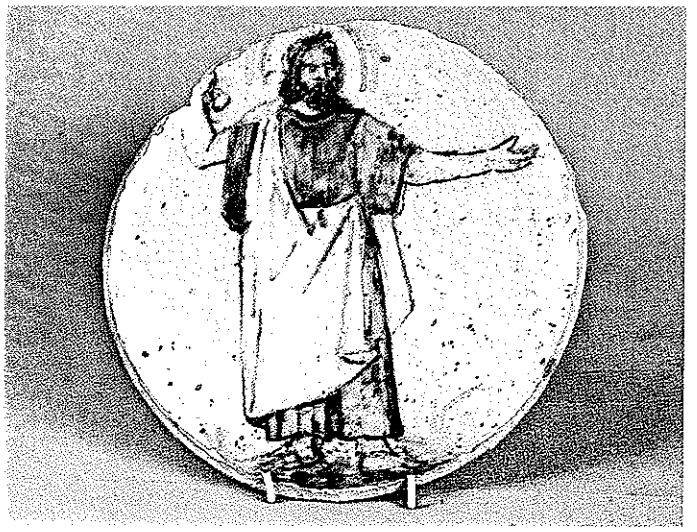
Traditionally, promiscuity is sanctioned and to avoid disclosure of such behaviour, discussion on sexual matters which may lead to medical examination and diagnostic testing is avoided. The diagnosis of AIDS may be impaired by a reluctance on the part of HIV positive patients to attend follow-up visits.

A number of doctors both black and white do not often test for HIV for fear of accepting the responsibility of having to inform and manage the patients subsequent to testing.

Conclusion

Two major problems confront South Africans of all races. Firstly, there is the political one in the form of apartheid and secondly the health problem in the form of HIV infection and AIDS. Whereas the replacement of apartheid with a democratic form of government for all may still take some time to reach fruition, the problem of HIV infection must be addressed now. One possible mechanism of accomplishing this could be through the involvement of community-based, nongovernment organizations which have credibility amongst the majority of people in South Africa. This would eliminate many of the obstacles confronting an AIDS programme. Time is not on our side viz-a-viz HIV infection. We need the vision and wisdom to realize that we must act now to prevent this potential biological holocaust.

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AIDS: General Ethical Aspects

MONSIGNOR CARLO CAFFARRA

My ethical reflection on AIDS will consider this disease insomuch as it is transmitted through the *free exercise of human sexuality*.

The ethical problems which are involved concern the behaviour of individuals already afflicted by HIV; people who have health care and educational responsibilities towards them; those who hold positions of responsibility in government in civil society; and those who hold positions of responsibility in the government of the Church. These will be the five points of my paper.

1. The Ethics of the Sexual Behaviour of Those Infected with HIV

Before exploring the solutions to the various problems involved it is necessary to give at least a sketch of the essential foundation upon which I will seek to build my reply to the large number of questions. This foundation is made up of a precise vision of human sexuality

Human sexuality is the human faculty to create an interpersonal communion which is internally and intrinsically ordered so as to establish the conditions for the conception of a new human person. For this reason the act of sexual conjunction is the act by which two people constitute themselves as a unity to be the source (procreators) of a new human life. This intrinsic ordering of the sexual act to life must not be understood in the sense that each and every sexual act *must* be fertile and that the sexual act finds its ethical justification *exclusively* in its fertility. It means simply two things:

a) every sexual relationship of a *homosexual* character is ethically wrong, insomuch as such a use of the sexual faculty is in *essential* contradiction with that faculty's purpose.

b) it is wrong to have a heterosexual relationship which is biologically fertile and to take previous/contemporary/subsequent action to render it infertile.

It follows from this vision of sexuality that the practice of sexuality must take place within a legitimate conjugal bond. This is so for two inextricably linked reasons. Indeed, only the indissoluble conjugal communion protects *humanity* in the wholly true sense of the sexual relationship; that humanity which is precisely made up of integral self-giving and, therefore, without limits of time, of the person. Indissoluble conjugal communion alone establishes the conditions, the context, by which a person can enter into existence in a way which corresponds to his dignity.

This vision of human sexuality must always be kept in mind when we deal with these various problems.

The first case: The Homosexual Behaviour of Those Infected by HIV

Infection with HIV *adds* a special gravity to homosexual behaviour. Indeed, it can even become a source of death, a gravely serious injury of the partner. This injury does not cease to be unjust even if the partner is warned of the danger and agrees to it: man, indeed, is not the owner of his own life and cannot do with it as he pleases.

I say 'add' with good reason. It is



not that homosexual behaviour becomes ethically wrong because of the possible transmission of the infection. It is so (that is to say, ethically wrong) in every case, because of the fact that this behaviour is totally allen to the intrinsic orientation of human sexuality towards procreation.

Every man can reasonably understand this, as the following passage shows:

"It is a common characteristic of every sexual perversion that reproduction as an end is excluded from it. This is the criterion by which we judge whether a sexual activity is perverse: if in its ains it does not take reproduction into account and seeks a gratification which is independent of it" (S Freud).

Homosexual behaviour is a form of sexual behaviour which, at a root level, has already divorced sexuality from the gift of life.

Even *allowing* for the fact that resort to the prophylactic can solve the problem of the transmission of the infection, homosexual behaviour, even if 'condomised', retains its logic of total and radical separation of sexuality from the gift of life, and keeps its logic of alliance with death.

The second case: Conjugal Sexual Behaviour and AIDS

Conjugal sexual activity is the language of conjugal *love*, and is intrinsically orientated and ordered towards the giving of life. From this intimate nature of the conjugal sexual act it follows that conjugal sexual life must be interrupted when one of the two marriage partners is afflicted by HIV.

Indeed, the love of the (sick) partner for the other cannot express itself through an act that can give death to the other partner. The fact that the healthy marriage partner is aware of the risk that is run and freely decides to accept the danger of contracting the infection does not change the above-mentioned judgements: nobody, in fact, is the owner of his own life.

There may, however, be situations in which conjugal sexual relationships *can* be ethically justified: when prolonged abstinence seriously affects conjugal harmony; when there is a serious danger that one or the other of the marriage partners will fall into incontinence or commit adultery.

The reason for this is that the good of conjugal communion and/or the good of helping the other partner to live out his marriage state in a devout fashion *can* reasonably induce the love of the married partners to prefer the defence of such forms of spiritual good as marriage harmony and the sanctity of life to the defence of the good represented by life.

I say, and with good reason 'can': this is not a *duty* to risk one's life, but simply a choice — a choice which, when these two above-mentioned conditions are present, is not always to be djudged unjust.



Is the use of the *condom* right in this case?

The affirmative reply to this question has been justified, in essential terms, by a dual series of reasons: a) to avoid conception (the child can be born infected); b) to prevent the transmission of the infection; c) for both these reasons. Yet none of these reasons is correct.

a) This is a true and real contraceptive act which is never right in any circumstance whatever or for any reason whatsoever. The relevant literature may be consulted here.

b) This is not a contraceptive act, either in itself or, hypothetically speaking, when an intention is present (here one is thinking of 'reserved' sexual relations during a clearly infertile period). However, in this case as well, use of the condom is not a morally acceptable act, and for the following reason. This sexual act is not a *conjugal* sexual act. Indeed, the act of sexual conjunction is morally good only when it is a *conjugal* act. Conjugality is here destroyed by the 'barrier' which hinders the two from becoming one flesh.

c) In the third case the act is even more morally serious because of the dual wrongdoing which is present within it: the wrongdoing of contraception and the wrongdoing of the anticonjugality.

2. Ethical Problems of Health Personnel in Contact with Those Infected by HIV

With regard to every reply given in this field it is also necessary at the outset to bear the appropriate civil legislation in mind. When there is a contrast between a civil norm and a moral norm each specific case must be studied, and this according to the classic principles of the relationship between human positive law and human law.

First question: Do the health personnel have the right to notify the condition of the patient a) to the married partner or the partner with whom he co-habits and b) to his own colleagues who may have some contacts with him?

Professional secrecy is one of the fundamental ethical values of human society and consequently must be defended.

However, the obligation to respect this secrecy is not of such a character as to allow of no exception. These exceptions are implicitly accepted at the moment when the relationship with the professional involved is established. (The only secret which permits of no exceptions is religious confession).

a) For this reason health personnel have the duty to inform the patient of the *very great* duty that he (the patient) has to inform his marriage partner. Whenever the patient does not wish to do this, the health personnel must seek his agreement to do so. Whenever the patient refuses this, the doctor *must* alert the healthy marriage partner.

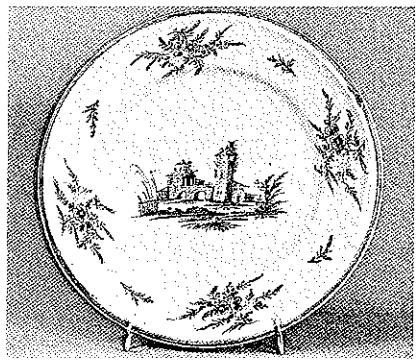
b) The civil laws of the relevant area must be considered: normally these are quite restrictive with regard to the health personnel who do not belong to the team treating the patient. Generally, these norms must be followed.

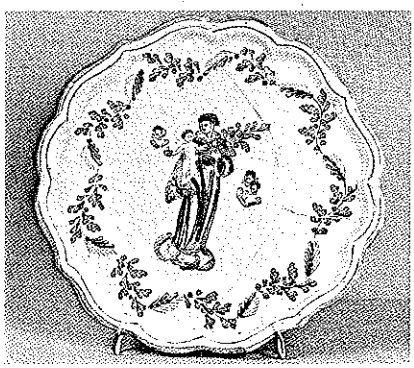
Second question: Do the health personnel have the right to refuse to give medical care to persons infected by HIV or AIDS?

A health worker cannot, in moral terms, refuse such care. In adhering to the medical profession an individual undertakes to serve people, and this can also imply serious risks for his own health or life.

A refusal is allowed when the patient fails to accept that he must comply with the very serious moral duties attached to his condition — for example, the duty to inform his marriage partner.

Indeed, it is always right to apply *morally correct* conditions to an interpersonal relationship.





3. Ethical problems in the pedagogic sphere

Here we use the term 'pedagogic sphere' in a rather narrow sense: the environment of young people, the environment of civil society (I will discuss state society below and the Church in the fifth point). At a tangible level: schools, youth communities, two-way relationships (educator-educated) — but not when a sick person is involved.

Perhaps this is the 'heart' of the whole question. Without in any way reducing the dignity and importance of the participation of scientific research in the treatment of AIDS, in this case as well, however, the principle of 'prevention is better than cure' is valid. And prevention *is not and must not* be the distribution of condoms: it is a *great* educational undertaking directed at a discovery of the beauty of the good present in human sexuality, but only when it is an expression of conjugal love.

This amounts to the definitive abandonment of an educational project which has often been followed in recent decades — a project which has not sought to communicate the *truth* about man but has involved the empty upholding of a freedom presented as offering every possibility. Boredom and despair are the fruit of this proposal. Freedom is taught when a submission to truth alone is taught.

The mortal illness of relativism — according to which every opinion is worthy of equal respect — above all else kills intelligence: what sense does the passion for research into truth make if every opinion, whether true or false, has the same value? It kills freedom, and it does this because by sterilising reason the individual increasingly abandons himself to his instinctive impulses — incapable as he is of transcending himself in a love for what is good.

Many consequences concerning the question we are considering derive from this fact. The time available to me allows me to make reference to only two.

The first. It is *never* legitimate to advise the use of the prophylactic according to the principle of the 'lesser evil'. Education is only education of the individual so that he can exercise his own freedom with respect for the dignity of the person — a dignity defended and promoted by moral law.

This certainly does not exclude *information*, as long as it is *correct*. But information must always be placed within the context of a judgement which is ethically negative towards nonconjugal sexual behaviour.

The second. It is not appropriate to insist upon the risk of HIV with the aim of detaching someone from wrong sexual behaviour. Freedom and the moral conscience are not educated with fear of physical affliction but with the testimony of the attraction of what is morally good.

It may, however, be of a *certain* utility to observe how a true exercise of a person's freedom *also* leads to an integral wellbeing of that person.

4. The ethical responsibility of who governs civil society

The health policy of the state must face ethical questions which are especially complicated and difficult. A complexity and difficulty which arise from the fact that it is not always possible to clearly see which political choice respects all those ethical principles which regulate public activity. These principles are: the duty of the state to take necessary measures to avoid the spread of the epidemic; the right of the citizen to be respected with regard to his privacy; the right (duty) to civil tolerance.

First question: Can the state organise campaigns for the diffusion of prophylactics using advertisements or other methods?

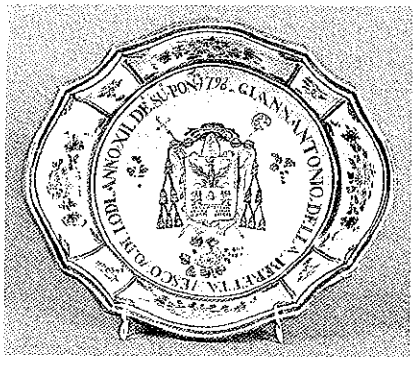
For various reasons such behaviour on the part of the state is not legitimate

In the first place, in this way the state truly exposes society to the very serious danger of a wider diffusion of the contagion, both because of the lack of safety of the means proposed and because in this way it actually favours forms of behaviour which can cause a further spread of the contagion.

In the second place, in this way it favours a liberalisation and a sexual permissivism which, in the short or long run, endanger, or at least involve the risk of darkening, the awareness of citizens — and above all else of young people — of the intrinsic value of certain bases of social co-existence: conjugal life and respect for the health of the other marriage partner. A favouring of such a use of sexuality is not only against the individual but also against the common good.

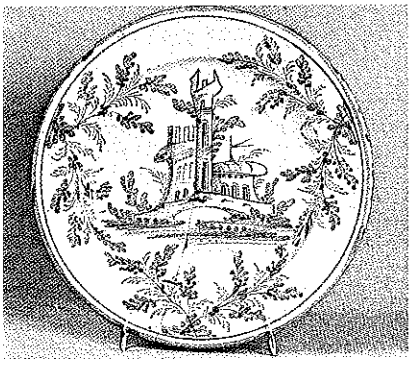
In the third place, it is not legitimate in this case to make appeal to the principle of civil tolerance — a principle accepted in the Christian tradition. In fact this principle merely affirms that the state must not prohibit everything that is morally wrong with its laws but only, as St. Thomas writes, 'quae destruunt humanum convictum' (2, 2, q. 77, ad lum). But the principle of tolerance *does not declare* that the state can *favour* or *propagate* in a certain way behaviour which is morally wrong: 'alia vero habeat quasi licita, *non quia ea approbet*, sed quia ea non punit' (ibid.). The good of the goal that the state proposes is not to be disputed: the greatest possible limitation of the spread of the contagion. It is the means used which is ethically unacceptable.

In this case the appeal to the principle of ethical pluralism is without foundation. Its recognition, in fact, in the legal system of the state has an untraversable boundary — the needs of the common good — that is to say, the defence and the promotion of those ethical values which are fundamental to every truly human society.



In actually favouring human activity (sexual) that can be very seriously injurious to innocent people, the state does not recognise ethical pluralism but merely fails to discharge its fundamental function — the attempt to achieve just co-existence.

Second question: can the state impose a general 'screening' to prevent the diffusion of the contagion?



Such a decision involves the risk of transgressing at least two fundamental values of the individual: that of respect for private life and that of determining the fate of one's own body.

To say the truth, the second risk is rather relative: one is dealing, indeed, with a normal extraction of blood.

When an infection reaches levels of high risk, it does not seem unreasonable for a state to pass from the health policy currently in use (to consider every patient who presents himself as potentially infected by HIV) to a more invasive policy — to require a screening as a pre-condition to being admitted to hospital. Obviously, all precautions must be taken to make sure that only those who could run a high risk of infection would come to know the results of such a screening.

It is not legitimate for the state to go so far as to require each citizen to undergo the test as a matter of obligation.

Third question: Is it right to subject a person to the HIV test without his consent?

On the whole, such a measure is not to be ruled out. On the following conditions: where there exist serious reasons for carrying out the test (for example, that of having an ever more precise knowledge of the development of the behaviour); and where the blood is legitimately acquired.

One is dealing, in fact, with adding another test to blood which has been freely given and which has been requested for morally right ends.

Fourth question: Is it right to develop a health programme which goes beyond the private life of the citizen, from the point of view of interference?

One should not forget when considering this question that, differently from other infections, AIDS is the result of *freely* chosen activities.

It follows from this that the first duty of the state is to supply correct and complete information which clearly indicate *which activities* can cause the contagion.

After such a work of information has been carried out, the number of people who can be infected against their will because of their morally legitimate free activity is actually confined to *deceived marriage partners*. Bearing what has gone before in mind, this risk as well is minimal and anyway not of such a character as to justify giving the state such powers.

In conclusion: the state must act *reasonably*, and not under the influence of two opposing emotional currents. That of those who when gripped by panic throw themselves into initiatives which are not ethically justified; that of those who, put under the pressure of public opinion regarding injustices (often thought to be such) perpetrated against homosexuals, do not carry out their fundamental duties regarding the defence of everybody's health.

5. The Ethical Responsibility of the Church and Her Clergy

In this dramatic story the position of the Church is special. She must allow herself to be guided, at a fundamental level, by a dual certainty. *The first* is that, as Newman writes, "the Catholic Church would prefer the sun and the moon to fall out of the sky, the earth to become sterile, and that the millions of men that live on it died of hunger in spasms of agony (with regard to temporal suffering) rather than have a single soul — let us exclude its being lost — even commit one venial sin, tell just one intentional lie, or steal a coin without good reason" (*Apologia pro Vita Sua*, Ch. V).

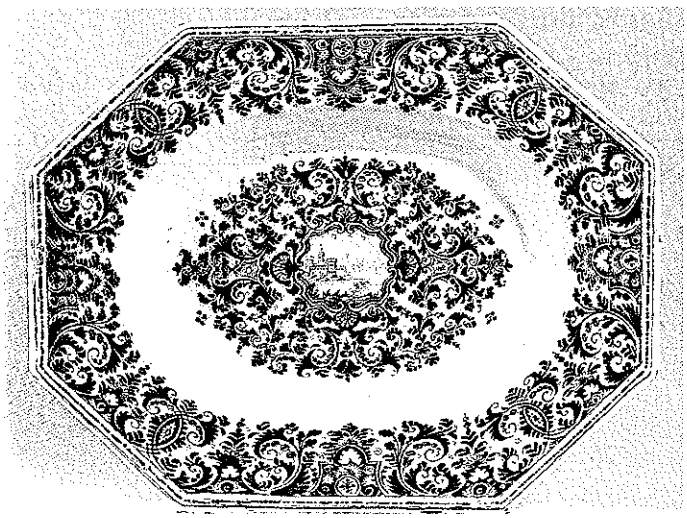
The second is that her mission is to reveal 'from generation to generation' the Mercy of God — to *this* human generation as well. A witness that must take place at two levels: that which is most truly linked to her Magisterium, that which is most truly linked to charity. This work of Magisterium consists in continuing to tell the world the *whole* truth about human sexuality and man. The work of charity consists in creating spaces of welcome where the person infected with AIDS can above all else encounter the Mercy of God in the peace of a forgiveness which rebuilds a person who is in all senses destroyed.

With regard to the state the Church must constantly remind public authorities of their duty "to create a climate favourable to the education of chastity, that is to say, to the triumph of healthy freedom over licence, through respect for moral order" (*Humanae Vitae* 22). Political choices, indeed, must be *preventive* (one is thinking here of the questions of pornography, violence, etc.) rather than *repressive*.

The faithfulness of the Church to her Lord — a faitfulness *sine glossa* — is in the end the best service, or rather the only service, that She must render to man.

Monsignor CARLO CAFFARRA

Dean of the John Paul II Institute for Marriage and Family Studies at the Lateran Pontifical University, Rome



The Modulation of the Immune System by HIV Infection

PROFESSOR FRITZ MELCHERS

The little we know of our immune system does not allow a precise description of the ways by which the human immunodeficiency virus (HIV) enters and destroys it. Our knowledge illuminates only parts of the scenario, and we do not know how to fit these different parts into a whole picture. The scenario which I describe here is incomplete and must be full of errors.

How the Virus Enters

The most common mode by which the virus enters is blood.

In blood we find some of the cells of the immune system, called lymphocytes and monocytes. One drop of blood on the tip of a needle contains near half a million of these cells. When this drop of blood is from an HIV-infected individual, many of the cells carry the virus inside them. This is so because monocytes (and their relatives, the macrophages), as well as a part of the lymphocytes, have on their surface docking stations (or receptors) for the virus, called CD4. The subset of lymphocytes which carries these docking stations functions in the immune system to help other cells in response to foreign invaders. That is why they are called helper cells. Since these cells are generated in the thymus, they are called helper T cells. CD4 docking stations are, in fact, a speciality of monocytes and helper T cells - no other cells of our body appear to have them. This is the reason why HIV infects the immune system, as other viruses may infect other parts of our body, because they use other docking stations.

Where Much More Virus is Produced

When a drop of HIV-infected blood enters the blood of a noninfected individual, two types of immune responses are set in motion. *One* is the reaction of the " host " against the virus which is carried in and on the cells of the infected " donor. " The uninfected host identifies the virus in and on the donor cells as something which is foreign to it. *The other* is a transplantation rejection reaction, in which the cells in the " donated " blood react against the new environment of the " host, " and where the cells of the host react against the new cells of the donor. They both react because donor and host — in fact, we all — are genetically different and, therefore, regard each other as foreign. In the first type of immune response, one in ten thousand cells react. In the second type, much more, i.e. one in one hundred cells do. In summary, one percent of all CD4- bearing helper T cells of donor and host will be stimulated, and this is a very important condition for the virus to infect and to multiply within the cells of the immune system of the donor as well as the host.



Normal Immune Responses

We think that we know the major players of the immune system which participate in an immune response to a foreign virus, or to a foreign environment.

a) *Help*

Helper T cells of the infected donor (carrying the virus) make contacts with monocytes (and macrophages, as well as a few other specialized cells of the body, like similar cells in the brain) of the uninfected host. Uninfected helper T cells of the host make contact with infected monocytes of the donor. Both contacts result in

stimulation of all participating cells.

Normally, i.e. with uninfected cells, stimulation leads to cell division. One cell produces two, then four, then eight and so on. Helper T cells are stimulated also to produce " help, " i.e. they begin to secrete " fuel " (called growth factors or cytokines). The fuel is needed by other cells of the immune system to divide and display their defense activities. Monocytes also divide and also produce " fuel. "

The cells which need the fuel are the " first line " soldiers of the immune system that directly combat the invading virus, or foreign cells.

b) *Killers*

One type of soldier is the killer T cell. It displays another structure on its surface, called CD8, which is *not* a docking station for HIV. Consequently, killer T cells are *not* infected by HIV and predominate in blood of the HIV-infected individuals - without the help by CD4 cells, which they need. Killer T cells recognize parts of the virus on the surface of the infected cell, thereby killing it. As an example, in an influenza infection such killing might be directed against cells infected in our lungs. Killing by T cells eliminates not only the virus but also the lung cells. Consequently, we feel weak for a few weeks until we have regenerated our lungs with new cells.

It appears that the immune system of HIV-infected individuals retains the HIV-specific killer T cells for a long time within the asymptomatic period of the development of the disease, but it is not clear whether they are not active due to lack of help, or whether they actually continuously kill the help, i.e. the infected CD4 T cells which they need.

c) *B Cells and Antibodies*

The second type of soldier is the B cell. Like the killer T cell it needs the help, " fuel, " of the helper T cell to divide and to display its defense functions. These defense functions are to secrete various classes of antibody molecules into the blood stream. The antibodies, in the case of a virus infection, are predominantly directed against this virus. They bind to the virus, carry it to a dump yard in the body (like the liver), where the virus is destroyed.

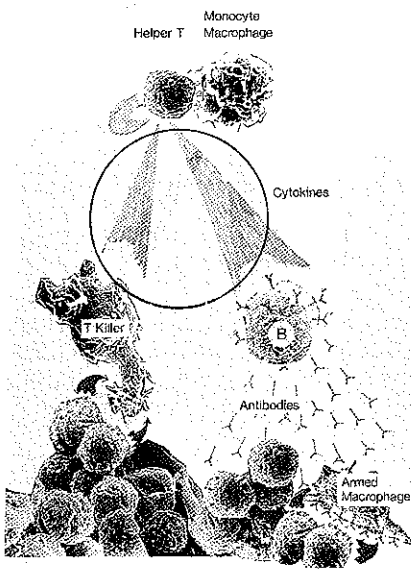


Fig. 1

In the normal immune response to a virus (indicated by a circle on Fig. 1) with the Helper T cells, monocytes and macrophages interact, producing cytokines which serve as " fuel " for the " first line " soldiers of the immune system, that is, the killer T and B cells fight the infection. The killer T cells (to the left) are stimulated to divide and to mature so as to reach attacking capacity to eliminate infected cells (bottom). In this attack they cover the infected cells, fire holes into them, thereby killing them. The B cells are stimulated to cell division and secretion of antibodies which mount and direct macrophages and granulocytes to attack the virus-infected cells.

The antibodies made against the virus can also arm other cells of the system, notably granulocytes and macrophages. Mounted onto these cells, the antibodies will direct these cells to the sites of virus infection and, thereby, lead an attack in which the granulocytes and microphages are the tanks which fire the holes into, and pour the toxic substances over the virus-infected cells (this reaction of the system is called ADCC — antibody dependent cellular cytotoxicity). Again, elimination of the infected cells is the result. It appears that HIV infection impairs the activity of this reaction, either because the cells are infected and paralyzed, or because the antibodies are no good.

Antibodies can also " neutralize " the virus. When they do so they bind to the parts of the virus which are used for docking (in the case of HIV to CD4) and for entry into cells, or they interfere with the correct assembly of an infectious virus. To elicit memory for such neutralizing antibodies in our immune system is still one of the major aims and hopes in the development of vaccines against viral infections.

Antibodies, however, can also facilitate the entry of a virus into cells. There are cells of the immune system which have docking stations for antibody molecules, either by themselves (called Fc receptors) or in combination with complements (called complement receptors). When virus-binding antibodies are produced in an immune response to a virus, they may thereby actually facilitate the entry of the virus into cells of the immune system. For many viruses this is not dangerous for the immune system (and therefore, for us), since many viruses do not multiply in the cells of the immune system. In the case of HIV, however, the virus appears to use monocytes and macrophages as reservoirs, can multiply in helper T cells, and can destroy these cells. It may, in fact, also be dangerous to vaccinate against HIV.

Immune Response Against HIV

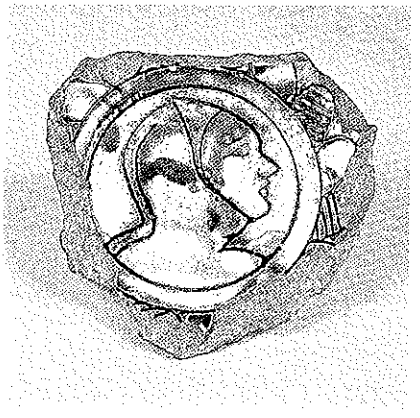
The initial entry of HIV, contained in donor blood cells, into the host clearly elicits a specific immune re-

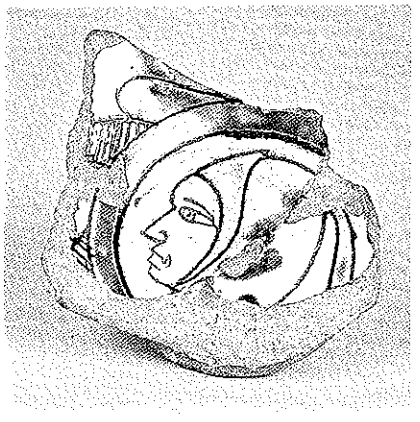
sponse against the virus. This is manifest for long periods of time by the presence of high numbers of HIV-specific killer T cells and HIV-specific antibody-secreting B cells. " Seropositivity " means that HIV-specific antibodies in response to the viral infection are detectable in the bloodstream of the host

a) *B Cells*

In the initial phase after injection and at " seroconversion " to HIV-specific antibody detectable in the blood stream, a large part of all B cells of the immune system are activated, and most of them do not produce HIV-specific antibodies. This might come about as follows: HIV-specific antibody binds the virus and transports it to the Fc-receptors and complement receptors located on *all* B cells. This facilitates the entry of the virus. Although the virus does not multiply in B cells, and also does not use B cells as a reservoir, parts of the virus appear on the surface of all these B cells. HIV-specific helper T cells recognize this and stimulate in all these B cells antibody secretion. The B cells eventually die of exhaustion, as they would in normal immune responses, or are even killed by HIV-specific killer T cells. Since most of the B cells do not produce HIV-specific antibody, such unspecific antibodies dilute out the HIV- specific ones and compete in arming granulocytes and macrophages for an ADCC reaction. The ADCC reaction is then no longer directed against HIV-infected cells.

In summary, the virus incapacitates both the B cell component of the immune system and thereby its ability to make HIV-specific neutrality antibody, as well as its ability to arm cytotoxic macrophages and granulocytes in their attack against virus-infected cells.





b) *Helper T Cells and Monocytes*

Helper T cells, unfortunately, are not activated to help killer T cells and B cells in their defense activities, but are also activated to multiply the virus. HIV, in fact, has adapted to the programs of molecular control inside helper T cells, which regulate cell division and development for production of help, i.e. of " fuel, " in such a precise way that the virus begins to multiply whenever helper T cells are activated to help. This means that the cells in the original drop of HIV-infected blood begin to produce in the new host vast quantities of virus which now infect host helper T cells, macrophages and monocytes with CD4 docking stations on their surface. Infected monocytes of the donor may also do that by transferring virus to uninfected helper T cells of the host whenever they make contact with each other. These possible reservoirs of HIV might, therefore, transmit the virus not only in HIV-specific immune responses to HIV-specific helper T cells, not only to helper T cells specific for a donor cell of infected blood, but may, in fact, transfer virus to *all* helper T cells whenever they recognize *any* foreign invaders which might infect us and, thereby, be presented by monocytes and macrophages which are already infected. Every time this happens, virus will then multiply in these activated helper T cells, a process which finally kills the helper T cells and, thus, kills the help to combat the invaders. The ability of HIV to remain in reservoir cells, like monocytes and macrophages, without killing them may in the end be as efficient to propagate the disease as the killing of helper T cells.

Destruction of the Supply Lines for New T Cells

The virus not only infects CD4 helper T cells and monocytes which have matured and are ready to help in defense against foreign invaders, it also destroys the supply of new CD4 helper T cells. This happens in the thymus.

Normally, our immune system replaces almost a tenth of a percent of all its cells in a single day. This means that of the one to two kilograms of our immune system, 10 grams (or one hundred million) cells are newly made per day - while others must die to keep the balance. This production might even be higher in children then it is in adults. In the thymus, T cells learn to distinguish between the body's own environment (where they learn to tolerate it) from all that could possibly be foreign, and which they might recognize later as an invader. T cells

which recognize " self " are, in fact, eliminated in the thymus.

During this learning process in the thymus, T cells also decide to become either CD4 helpers or CD8 killers. Before, and as they learn and decide they have *both* CD4 *and* CD8 on their surface. This means that HIV can infect them in the thymus. Again, the cells cooperating in this learning process appear to be, in part, monocytes and macrophages, as well as other types of cells which might all serve as reservoirs for the virus. The net result of HIV infection in the thymus appears to be the complete destruction of the cells which serve as sources for the supply of mature T cells in the system. It is surprising that it takes years before the system has dropped the number of CD4 T cells in the blood to ten percent of the normal contents, a time at which the body finally appears to succumb to a variety of infectious diseases

In conclusion, the virus not only kills the help against any foreign invader that the immune system may have in its mature repertoire, it also kills the supply lines which might be able to rebuild new cells and new help. In children the result of this destruction appears to be more devastating than in adults, maybe because children still build up their mature system of helper T cells, while adults live from the T cells which they have built up during their childhood.

Variability of the Virus vs. Diversity of the Immune System

Even if all defense activities of the immune system were functioning properly — and whenever, in fact, they actually do in the progression of the disease — the virus has yet another way to confuse these defenses. This is because it is not one but many, many different viruses which originally infect the host, and many, many more, which are generated by multiplication in the infected host. They are all different because a very imprecise copying mechanism operates when the viruses are multiplied. Our immune system, therefore, has to deal with many, many different forms of the virus. As it builds up defense activities against one set of viruses, new ones grow out which evade recognition. Since the viruses multiply much faster and into more different forms than the immune system can possibly recognize, even with one million times one million cells, the immune system can never keep up with the ever-increasing number of different viruses. This, then, implies that our immune system is not only incapacitated by the many actions of HIV which deregulate or kill it, but also because the viruses are more varied in form than the diversity of recognition that the immune system has in store. One hope remains: that the virus cannot vary all of its structures without losing its deadly life, and that the immune system can be stimulated to launch a successful response against such structures.

Conclusions

Our immune system appears helpless against infection by HIV. HIV has developed a variety of strategies to incapacitate the immune system

1) HIV varies its structure more, and faster, than the diversity of immune recognition is capable of dealing with

2) HIV multiplies in helper T cells and uses the same mechanisms for multiplication which the cells use to divide and to produce help for the other cells with defense activities in the system. As a result of virus multiplication, these activated helper cells are killed, which, therefore, kills help for killer T and B cells specific for and directed against the virus.

3) HIV appears to use monocytes and macrophages as reservoirs. Since these cells take up and present all foreign invaders to helper T cells, they probably infect these invader - specific helper T cells in the process and, thereby, kill them. This leaves the HIV-infected body helpless in an immune response against any invaders.

4) HIV activates large numbers of B cells and then depletes them. As a possible consequence, antibody-mediated defense activities are impaired, and virus neutralizing antibodies are diluted out.

5) HIV cuts the supply lines for new T cells in the thymus by infecting and killing these cells, which normally renew the system of helper and killer T cells.

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* The Basel Institute for Immunology was founded and is supported by F. Hoffmann-La Roche Ltd., Basel, Switzerland.



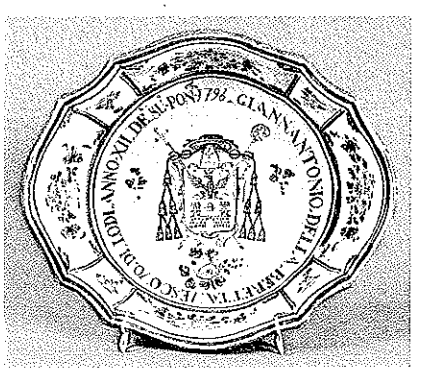
Progress in Vaccines against AIDS

PROFESSOR DANI P BOLOGNESI

The pessimism shadowing the development of an AIDS vaccine is showing some signs of receding. This is a result of advances on several fronts including; 1) the first examples of efficacy of killed virus vaccines in various animal models, 2) the identification of important immunological targets on the virus and the infected cell and 3) information that humans respond favorably to certain candidate immunogens (1,2). Indeed, as a result of these and other studies, apparent obstacles are being lifted and new concepts on how to approach a vaccine are evolving.

The most striking results obtained from the animal model studies with simian immunodeficiency virus (SIV) by the laboratories of Ron Desrosiers (3), Mickey Murphy-Corb (4) and Murray Gardner (5), as well as with equine infectious anemia virus (EIAV) by Ron Montelaro (6). In each example whole killed virus vaccines were able to delay the onset of disease for a significant period of time; possibly permanently, as the experiments may eventually demonstrate. Notably, protection against the respective diseases caused by experimental challenge with SIV and EIAV could be achieved even in cases where actual infection by the virus was not prevented. The importance of this development is underscored because it suggests that the same general rules may apply to HIV vaccines as have existed for other viruses; namely that it may not be necessary to completely block infection in order to have a successful vaccine. If some degree of infection with HIV can indeed be tolerated, a vaccine against the virus is much more within reach. It also suggests that some of the studies already performed in chimps with HIV [which were considered failures because infection was not prevented] might have had a more favorable outcome had a disease end point been available.

That is not to say that one should not strive to develop mechanisms to clear the virus. Indeed, some of the examples with both SIV and EIAV apparently were also able to prevent against infection (3,4,6). In this regard, an experiment by Joseph Gibbs and Jonas Salk achieved a surprising result when whole killed virus was administered to two chimps infected long term with HIV with an outcome that the infection was apparently cleared within the bloodstream (7). Post-exposure immunization in man with the same preparation has also been studied by Salk although the results are still equivocal (8) However, long term studies initiated in 1986 and still in progress by Daniel Zagury, Bob Gallo and their colleagues using autologous cells expressing HIV antigen have resulted in sustained positive therapeutic effects in patients with AIDS which include elevations of CD4 lymphocytes (9) Taken together, these results suggest that the immune system might be harnessed to protect man from HIV infection and perhaps to improve on the course of disease.



Although the animal model studies with SIV are of extreme importance for providing concepts and strategies for vaccine development, SIV is not HIV and sub-human primates are not the equal of man The SCID-Hu mouse chimeras in which components of the human immune system are able to survive for several months show some promise in this regard (10, 11), particularly as infection models for HIV. However, a clear demonstration that these animals can mount an immune response to the virus is lacking. Until that is achieved their use is limited primarily for testing the protective effects of immune responses generated in other systems through adoptive transfer.

Although instructive during preclinical development, whole virus vaccines do not represent a practical avenue for a vaccine against HIV. For this reason many laboratories are using the reductionist approach, which seeks to define the essential components of the virus that would confer protection. Along these lines, advances have been made in several directions, including a vast array of neutralizing epitopes, T-cell epitopes which are targets for cytotoxic lymphocytes and regions of the virus envelope which can target antibodies which mediate antibody dependent cell cytotoxicity (ADCC). In total, nearly twenty such sites have been mapped as linear epitopes (12; Figure 1, Table 1).

The principle neutralizing epitope of HIV is situated within the third hypervariable region, the V3 loop (Fi-

gure 2) of the external envelope glycoprotein (gp120). Recent studies by Emilio Emini and colleagues have shown that when given with the virus, neutralizing antibodies to the loop can protect chimps against HIV infection (13). Nevertheless, the usefulness of this segment in vaccine design appeared limited because of its apparent extensive variability. However, recent studies by a number of groups (led respectively by Scott Putney, Jaap Goudsmit, Bob Gallo, Barton Haynes and myself) have provided evidence that in natural isolates of HIV there is considerable pressure to conserve a critical portion of this loop, suggesting that certain serotype classes may indeed exist in the population (14). Interestingly, studies by Jane McKeating (15), as more recently by Peter Nara and Jaap Goudsmit (16), indicate that conformational constraints imposed by other changes in gp120 may be as important as primary sequence variation within the loop in regulating susceptibility to neutralizing antibodies.

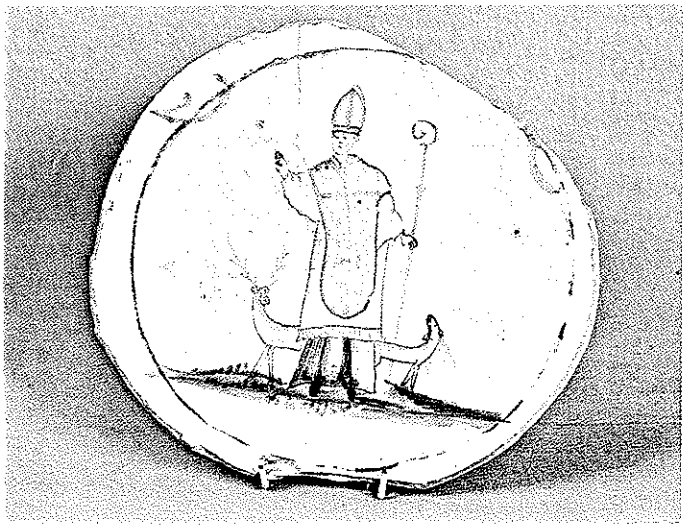
Other neutralization targets also exist on the virus envelope, and one of these, situated within the transmembrane component (gp41), is highly conserved. Originally described by Ron Kennedy (17), it has resurfaced as a more powerful epitope when inserted in the VP1 domain of poliovirus (18). Cocktails of this epitope and the loop, neither of which are involved in the binding of the virus to this receptor (so that the respective antibodies do not have to compete against the high affinity interaction which occurs between gp120 and CD4), would be attractive as components of a vaccine regimen.

A number of unique T-cell sites have been defined on the virus envelope, its internal components as well as in its regulatory elements. Some of these can be targets for cytotoxic lymphocytes isolated from HIV seropositive individuals. Along with a number of sites on the envelope which serve as targets for ADCC, a substantial arsenal is thus available with which to attack virus-infected cells. This is important for two reasons; (1) natural transmission of HIV occurs both through free virus and virus-infected cells and (2) some degree of infection of host cells probably cannot be avoided even with the ultimate vaccine strategy. Thus, to be effective against the various modes of natural HIV transmission, a clearance mechanism for the infection must be established through vaccination.

Just as targets for protective immunity are being defined, one is beginning to understand the features of the virus which produce undesirable responses by giving rise to immunosuppressive effects and antibodies which enhance rather than prevent infection. Enhancement of HIV infection has thus far been limited to observations *in vitro* (for review, see 19). It has not been documented in animal model studies of HIV or SIV vaccine testing and more specifically has been looked for and not found in humans immunized with HIV antigens which form part of Daniel Zagury's studies (20). Nevertheless, in order to guarantee safety and maximal efficacy it is important to eliminate any potentially harmful epitopes from vaccine regimens (Figure 3).

These encouraging steps notwithstanding, the challenges standing before the development of an HIV vaccine are prodigious. Ways to present HIV antigens to the human immune system so as to evoke protective humoral and cellular immunity are still being perfected. Much more has to be done along the lines of development of safe and effective adjuvants or constructions of innocuous replication vectors into which critical HIV target epitopes can be incorporated (Figure 4). More has also to be known about the role of secretory immunity in a protective response against sexual transmission of HIV. However, by far the most formidable barrier will be the evaluation of efficacy of a vaccine candidate in man given issues such as the low attack rate of HIV infection in the population and the long and variable interval between infection and disease (21). As research produces more and more compelling vaccine candidates, such obstacles will hopefully also be overcome.

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Table 1

Selected sites of the HIV envelope grouped into various categories. For position on linear map see Figure 3

HIV Envelope Domains

gp 120		gp41	
	Selected Functional Domains		
105-117	gp-41 complementarity (7)	518-527	fusogenic sequence
269	post-binding, viral entry	579-601	gp120 complementarity (?)
303-337	post-binding, fusion	691-712	membrane span
420-463	CD4-binding	840-862	viral infectivity, cytopathicity
	Virus Neutralization Epitopes		
254-274		582	neutralization resistant mutation
303-337	variable	584-609	
458-484		616-633	
491-523*		735-752	conserved
* Antibodies to this region are also thought to enhance infectivity in cells bearing receptors for complement			
	T-Cell Epitopes		
112-124		584-609	
315-329	CTL variable		
410-429	CD4 + CTL		
428-443			
	ADCC Targets		
315-329	variable		
474-518	conserved		
630-692	(not precisely mapped)		
	Regions of Homology with Known Molecular Structures		
254-274	6-glucophosphoisomerase HLA-DR	518-527	fusogenic domain
		583-599	immunosuppressive sequence
		831-837	HLA-DR
		840-862	IL-2
	Immunodominant Epitopes		
504-518		579-601	

Figure 1 - Composite of selected sites on the HIV envelope discussed in this report. Additional regions of the envelope that are critical for various viral functions have been identified by insertional deletion mutagenesis and are reviewed in (22).

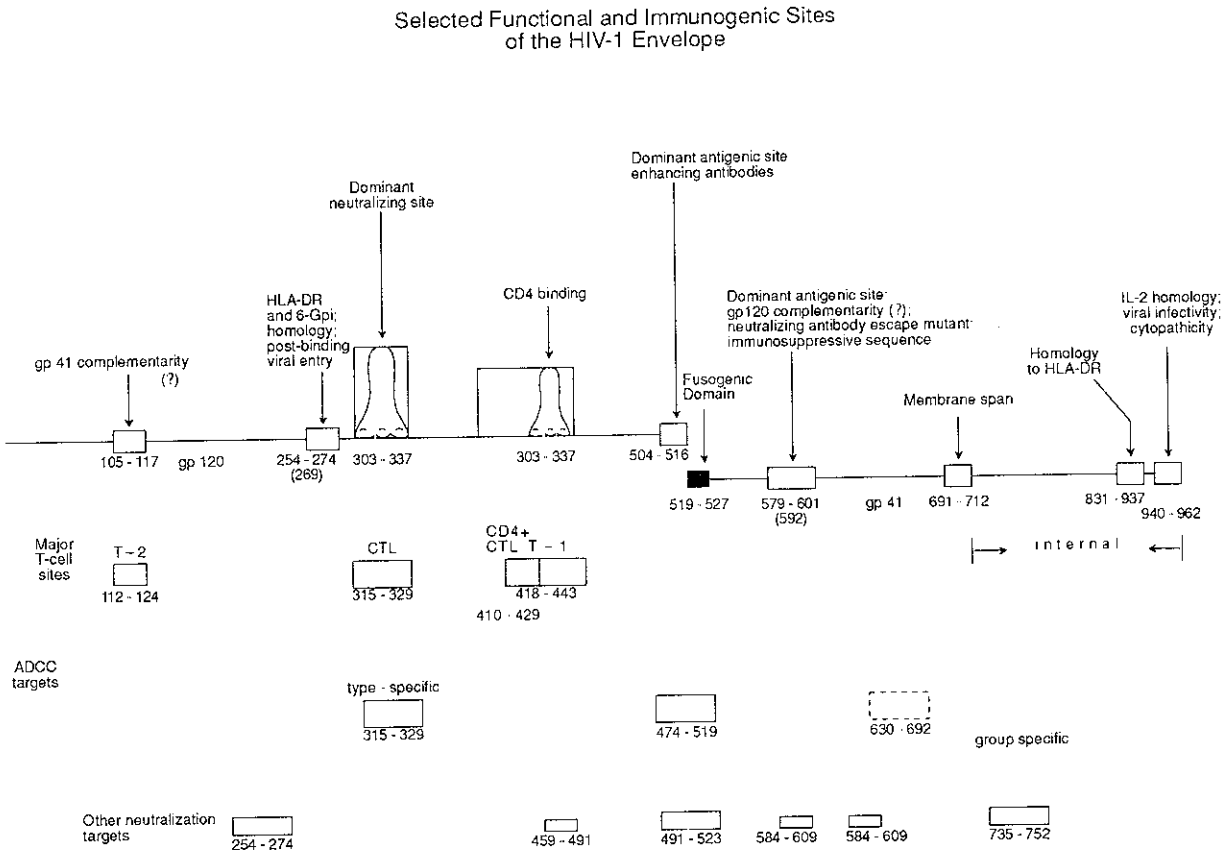


Figure 2 - Depicted is the loop sequence of the HTLV-IIIB strain of HIV which defines the principle type specific neutralizing determinant. The eight amino acid peptide from the tip of the loop is sufficient to elicit neutralizing and fusion inhibiting antibodies.
The amino acids at the two sides of the loop represent the regions where the variability is most extensive. By contrast the sequences at the base of the loop are more conserved as are the cysteines and the flanking glycosylation sites. Variations at the sides or the crown, but not the base can affect recognition by neutralizing antibodies.

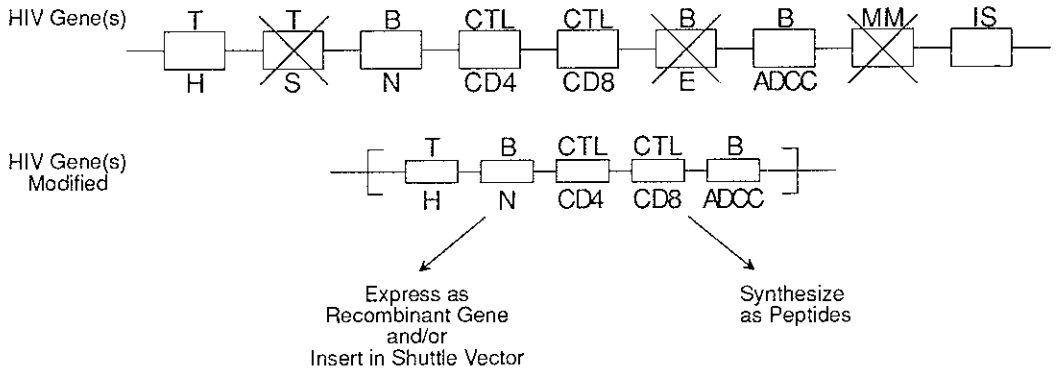
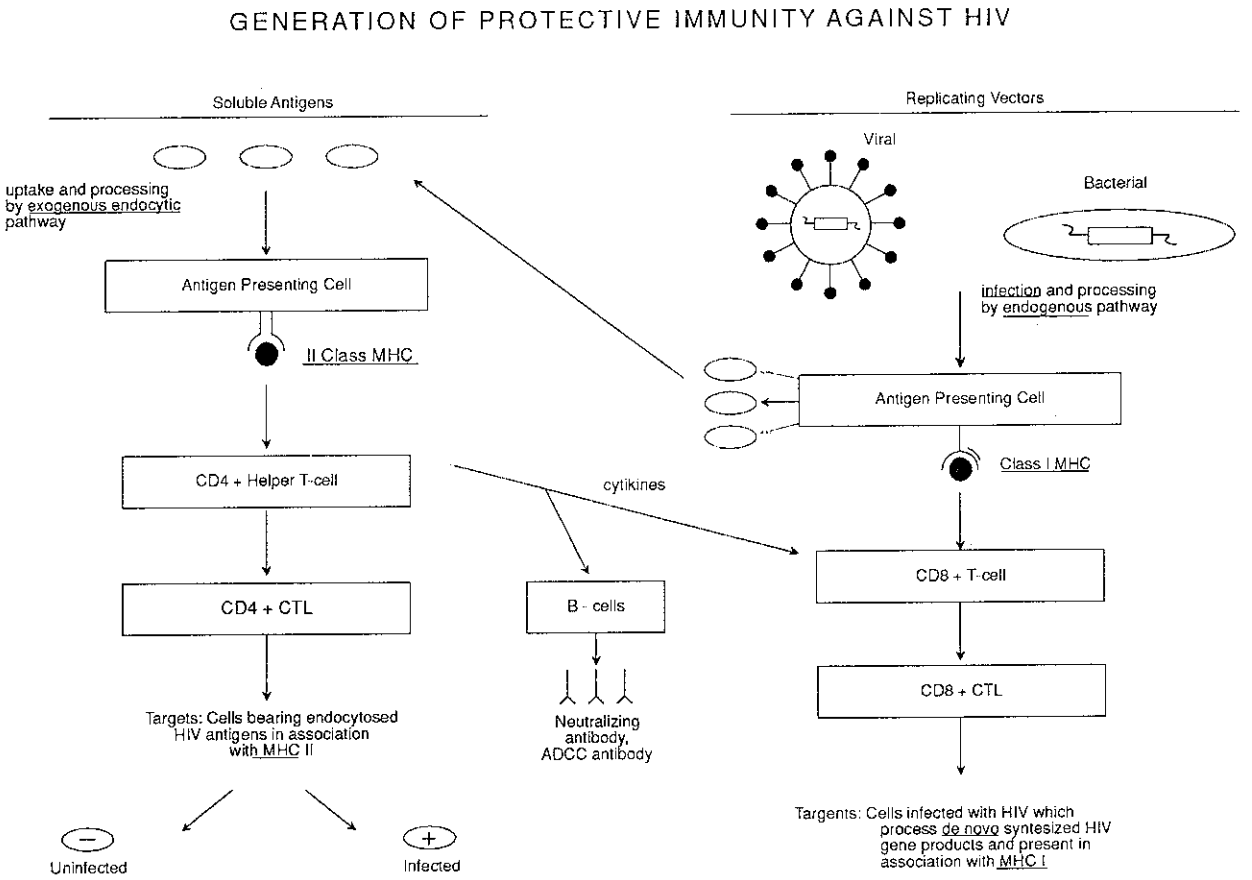


Figure 3 - Selection of epitopes which induce protective responses and exclusion of undesired regions. As domains of HIV gene products that induce defined immune responses become identified, some rational selection can be made to devise an improved immunogen through recombinant DNA technology or by direct chemical synthesis Epitopes that are conformational in nature or require post-translational modifications would probably require recombinant approaches in mammalian expression systems (some B-cell epitopes).

T/H - T-cell epitopes required for help.
T/S - T-cell epitopes which give rise to suppressor cells.
B/N - B-cell epitopes responsible for neutralizing Ab.
B/ADCC - B-cell epitopes for ADCC.
B/E - B-cell epitopes which elicit enhancing Ab.
CTL/CD4 - Epitopes for CD4+ CTL (class II MHC dependent).
CTL/CD8 - Epitopes for CD8+ CTL (class I MHC dependent).
MM - Regions which mimic normal cell surface antigens (molecular mimicry)
IS - Regions which are directly immunosuppressive.
Various arrays could be configured in the restructured gene or peptides including multiple representation of the indicated regions



Interferon-Gamma: a Marker for Activated T-Lymphocytes in AIDS Patients

Professor ADOLFO TURANO

Introduction

Acquired immune deficiency syndrome (AIDS) is characterized by severe T-cell deficiency and abnormal B-cell behaviour, clinically reflected in an increased frequency of opportunistic infections and of Kaposi's sarcoma (1-4). A broad spectrum of abnormalities is common in AIDS patients, ranging from a drastic reduction in the number of CD4 lymphocytes, to a depressed proliferative response to mitogens, antigens, alloantigens and autoantigens (1-5). Although the activation of the cellular immune system seems to contrast with the clinical features of AIDS, the high serum levels of α, thymosin, acid-labile interferon-α (6), soluble rIL-2 (7), and neopterin (8) in AIDS patients are consistent with such activation. Yet no direct evidence of activated T-lymphocytes was obtained with rIL-2 and transferrin-receptor, which are the most widely used markers of T-cell activation and are considered to be essential for the proliferation of T-cells to mitogens and antigens (9). Therefore, all the data on record is unable to explain whether HIV-1-infected patients have an activated or a depressed cellular immune system.

We recently developed an immunofluorescence assay to evaluate the expression of IFN-Y on the surface of circulating lymphocytes, using flow cytometry and an anti-IFN-Y monoclonal antibody (MAb), named IGMB-14, as a specific reagent (10). We discovered that the expression of IFN-Y on T-lymphocytes marks activated T-cells both *in vitro* (10) and *in vivo* (11). The present study evaluates the number of IFN-Y-expressing lymphocytes in blood samples taken from HIV-1-infected individuals, and compares it with other markers defining T-cell subsets and activated T-lymphocytes

Subjects and methods

Patients

Blood was obtained from 61 HIV-1-infected patients (all I.V. drug abusers; 45 men, 16 women; age range 17-54, with a mean - SD of 29 3 - 6.7). Infection was established with an enzyme-lynked immunosorbent assay (ELISA) (Wellcozyme anti-HTLV-III; Wellcome Diagnostics, Dartford, U.K.) and confirmed by Western blot (12). Clinical status was defined by the physician according to the CDC classification system (13). Subjects were grouped according to the stage they presented: 24 patients were in stage IV-C and yet had no acute opportunistic infection at the time of investigation; 18 were in stage III; the remaining 19 patients were in stage II.



Controls

Blood was also obtained from the following two groups of subjects: a) 61 healthy blood donors, age and sex-matched with the 61 HIV-1-infected patients, and b) 24 HIV-1-seronegative healthy I.V. drug abusers (18 men, 6 women; age range 19-32 with a mean - SD of 23 - 4.6).

Cell separation and immunofluorescence

Peripheral-blood mononuclear cells (PBMC) were separated from heparinized blood by Ficoll-Hypaque density gradient (Pharmacia, Uppsala, Sweden), and the cells stained either by direct or by indirect immunofluorescence method using a panel of monoclonal antibodies. These included Leu 4 (CD3;pan T), Leu 3 (CD4;helper/inducer T-cells), Leu 2 (CD8;suppressor/cytotoxic T-cells), Leu 11 (CD16;NK cells). Leu 12 (CD19;B cells), anti-rIL-2 (CD25;activated T-cells), anti-trasferrin-receptor (CD71; activated T-cells) and anti-HLA-DR (Simultest Leu 4/anti-HLA-DR;activated T-cells) — all supplied by Becton-Dickinson (Mountain view, CA) — and MAb IGMB-14 (IFN-Y;activated T-cells) (10). Fluores-

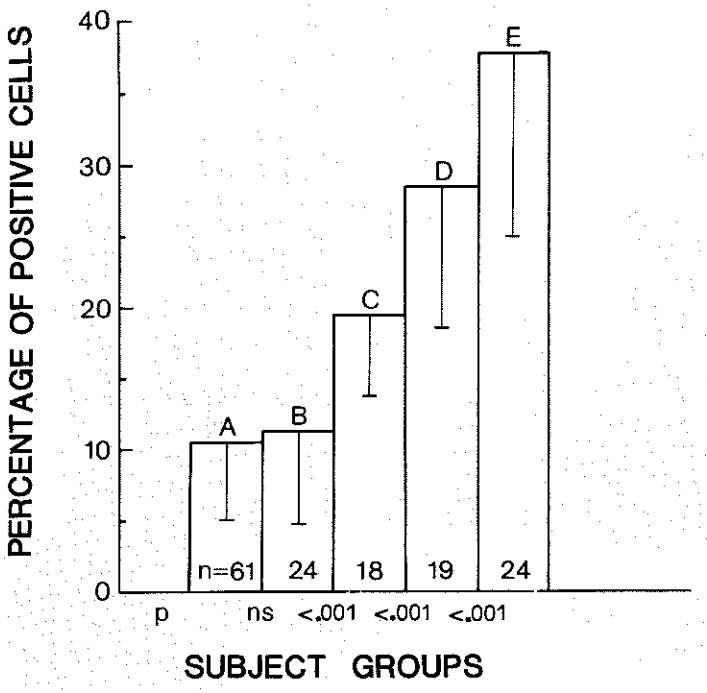


Figure 1. - The percentage of IFN-Y-positive lymphocytes in blood samples taken from HIV-1-infected patients with different clinical features. A. Healthy blood donors; B. HIV-1-seronegative I.V. drug abusers. C-D-E. HIV-1-seropositive patients in stage II, III, and IV-C respectively Statistical comparisons were made by Mann-Whitney U test.

cein isothyocyanate (FITC)-conjugated goat anti-mouse IgG was supplied by Becton-Dickinson. Immunofluorescence assay was performed by incubating 1x10 gradient-separated PBMC for 30 min on ice with appropriate amounts of reagent diluted in phosphate-buffered saline (PBS) containing 1% bovine serum albumine (BSA) (w/v) and 0.2% NaN3 (assay buffer). The cells were then washed twice with assay buffer and analyzed on the cytofluorimeter FACStar (Becton-Dickinson). Cells treated with unlabelled MAbs were incubated with FITC-goat anti-mouse IgG for 30 min on ice. They were then washed four times and analyzed on the FACStar. For dual-color immunofluorescence, we employed phycoerythrin (PE)-conjugated Leu 4, Leu 3, Leu 2, Leu 11, and Leu 12 all supplied by Becton-Dickinson.

Flow cytometry

Immunofluorescence analysis was performed on the FACStar flow cytometer, equipped with a single argon ion laser (Coherent, Palo Alto, Ca). Data analysis for single- and dual-color immunofluorescence was performed using a 560 nm dichroic filter with a 550 nm bandpass filter (placed in front of the green photomultiplier) and a 570 nm long-pass absorbance filter (placed in front of the red photomultiplier tube).

Statistics

Data was analyzed by Mann-Whitney U test to determine significant differences between group means. Linear correlation coefficients were determined between the number of IFN-Y-expressing lymphocytes recognized by MAb IGMB-14, and the number of lymphocytes expressing other molecular markers. The whole study was carried out without any knowledge of the clinical status of patients or of their clinical stage.

Results

Lymphocytes expressing IFN-Y on their surface were evaluated in 61 HIV-1-infected patients, and in 85 healthy subjects (61 of whom were blood donors and 24 were HIV-1-seronegative I.V. drug abusers). As shown in Fig 1, while no significant difference appeared between the percentage of IFN-Y-positive lymphocytes in the healthy blood donors and in the HIV-1-seronegative I.V. drug abusers, the same difference increased significantly when each group of HIV-1-infected patients was compared with the healthy individuals. At the same time, the percentage of IFN-Y-positive lymphocytes was found to increase with progressive stages of HIV-1 infection in our patients, with the highest values found in AIDS patients (stage IV-C) (36.6% - 12.1% SD).

Three out of the 24 AIDS patients were monitored for more than four months for the presence of circulating IFN-Y-expressing lymphocytes. As shown in Fig 2, the percentage of IFN-Y-positive lymphocytes in these patients was very high from the beginning of our study, and remained so, even in a blood sample obtained from one of these 3 patients just a few days before his death (see *).

Table I compares the lymphocytic subpopulation in the five groups of HIV-1-infected patients and of healthy individuals. HIV-1- infected patients in stage IV-C showed a decrease in the number of circulating T lymphocytes and a sharp fall in the ratio of CD4/CD8 lymphocytes. However, concerning specific questions set forth in this study, such as the presence or the absence of activated T-lymphocytes in HIV-infected patients, the only marker capable of detecting activated T-cells in our patients was found to be IFN-Y expressed on lymphocytes, as detected by MAb IGMB-14.

No significant difference among other markers of T-cell activation, such as rIL-2, transferrin-receptor,

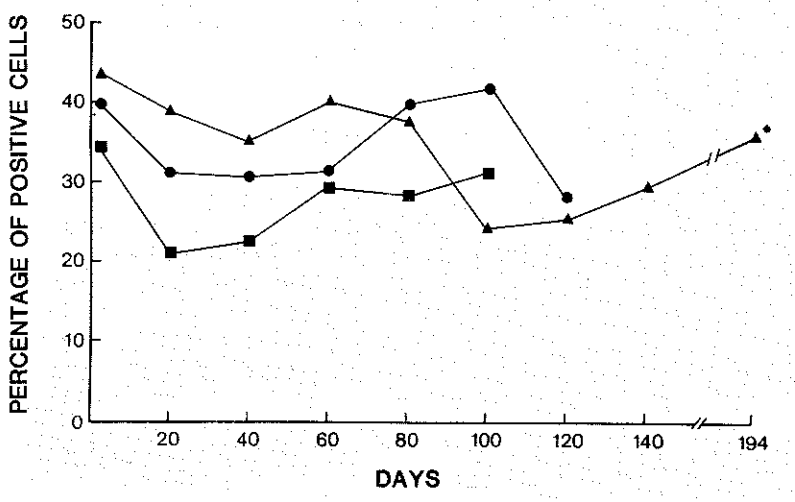


Figure 2. - The kinetics of IFN-Y on lymphocytes of 3 AIDS patients.
*** The percentage of IFN-Y-positive lymphocytes was evaluated 3 days before the patient's death (*).**

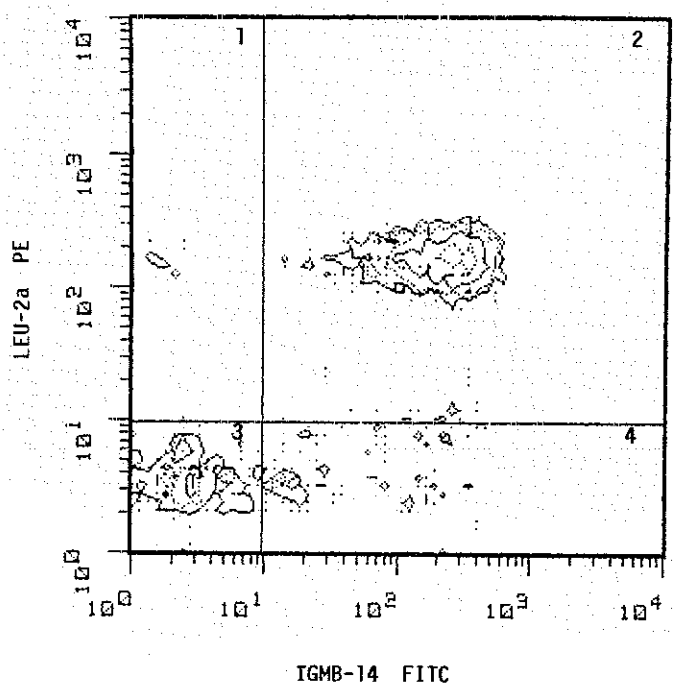


Figure 3. - Dual-color analysis (Logarithmic fluorescence intensity) of lymphocytes obtained from an AIDS patient. Window 2 includes CD8+/IFN-Y+ limphocytes; Windows 1,3 and 4 include CD8+/IFN-Y-, CD8-/IFN-Y- and CD8-/IFN-Y+ lymphocytes respectively.

and HLA-DR was observed in any of the five groups of screened subjects. In particular, only 3 out of 61 HIV-1-infected patients (4.9%) had an increased percentage of rIL-2-positive lymphocytes, with 2 of them in stage IV-C and the other one in stage III; only 2 out of 61 (3.2%) had an increased percentage of transferrin-receptor-positive lymphocytes, and both had AIDS; 11 out of 61 (18%) had an increased percentage of HLA-DR-positive lymphocytes, 3 of them were in class II, 2 in class III, and 6 in class IV-C. On the other hand, 44 HIV-1-infected patients out of 61 had an increased percentage of IFN-Y-positive lymphocytes (72.1%); 9 of them were in class II, 13 in class III, and 22 in class IV-C.

Linear-regression coefficient data for the number of IFN-Y-positive lymphocytes in the HIV-1-infected patients showed a correlation with the number of CD8-positive lymphocytes ($r = 0.728$; $p > 0.001$), while no correlation was found with the number of lymphocytes bearing other markers, namely CD4 ($r = 0.185$; $p > 0.2$), CD16 ($r = 0.196$; $p > 0.2$), CD25 ($r = 0.192$; $p > 0.2$), CD71 ($r = 0.213$; $p > 0.2$), or with the ratio of CD4/CD8 lymphocytes ($r = 0.04$; $p > 0.8$) except for a moderate correlation with the number of HLA-DR-positive lymphocytes ($r = 0.462$; $p > 0.001$).

The linear-regression coefficient data agrees with data obtained with dual-colour immunofluorescence analysis. Cells were analyzed for simultaneous expression of IFN-Y and CD3, CD4, CD8, CD16 and CD19 markers. IFN-Y was found to be entirely expressed on T-lymphocytes both in the healthy subjects and in the HIV-1-infected patients, since all IFN-Y-positive cells expressed CD3 but not CD19 molecules. In the healthy subjects, IFN-Y-positive cells equally expressed CD4 and CD8 molecules. An increase in IFN-Y/CD8-positive lymphocytes was found in HIV-1-infected patients. Patients in stage IV-C were found to have most of the IFN-Y-expressing cells defined as CD8-positive lymphocytes (Fig 4).

Discussion

Our immunofluorescence assay was developed to evaluate the expression of IFN-Y on the surface of circulating lymphocytes, using flow cytometry

and an anti-IFN-Y MAb, named IGMB-14, as a specific reagent (10). The expression of IFN-Y on T-lymphocytes was found to mark activated T-cells both *in vitro* (10) and *in vivo* (11). Using this specific assay we were able to prove that activated T-lymphocytes, mostly CD8-positive cells, are present in HIV-1-infected patients, and that the percentage of IFN-Y- expressing lymphocytes, always higher in HIV-infected patients than in healthy subjects ($p > 0.001$), increases with progressive stages of HIV-1 infection (Fig 1). At the same time, the percentage of lymphocytes expressing other markers of T-cell activation, namely rIL-2, transferrin-receptor and HLA-DR, was not found to be significantly different in the HIV-1-seropositive patients and in the healthy individuals, as well as in the three groups of HIV-1-infected patients under observation. This data shows that the expression of IFN-Y on circulating lymphocytes is the only marker capable of detecting activated lymphocytes in HIV-1-infected patients. Therefore our IFN-Y assay can be used for predicting the progression of HIV-1 infection, probably for monitoring treatment trials and —in conjunction with other parameters — for further research on the role of cellular immunity in HIV-1 infection.

Our finding of activated T-lymphocytes in HIV-1-infected individuals is important because the replication of HIV-1 is well known to depend closely on the stimulation of target cells (14). T-cell activation *in vivo* might contribute to a further spread of HIV-1 in infected individuals. Thus, permanent or multiple stimulation of the cellular immune system might represent the often discussed cofactor in the syndrome's progression, as previously suggested by other researchers (15). Furthermore, by focusing our attention on IFN-Y, we recently discovered that this lymphokine is expressed on the surface of HIV-1 (16) and that high titer antibodies to it are observable in sera from HIV-1- infected individuals (17). All such findings, together with those here reported, are consistent with a possible role of IFN-Y in the pathogenesis of AIDS. An analysis of all data collected till now concerning the interaction of IFN-Y with HIV-1 and its presence in HIV-1-infected patients, can be of great help not only in furthering our understanding of the immune mechanisms involved in AIDS, but also in opening new insights into its pathophysiology and its clinical features.



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Director of the Microbiology Institute at the University of Brescia Italy

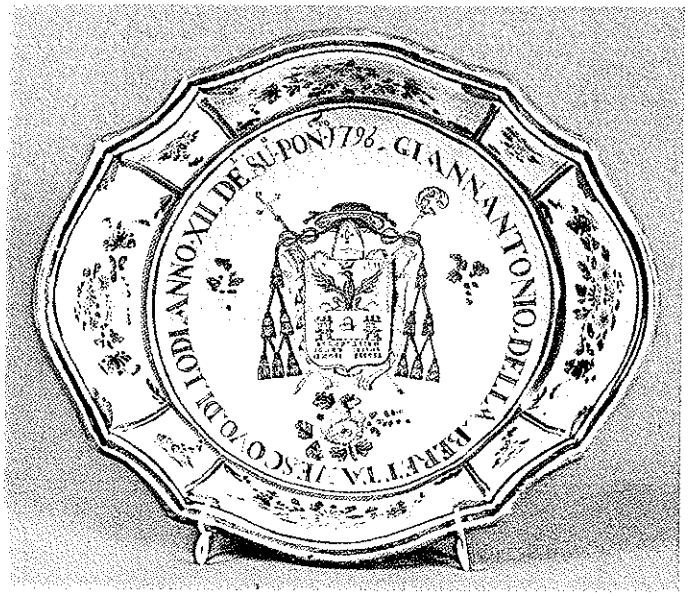
Table 1

Subjects	Lymphocytes (absolute number/mm³)	Proportion of lymphoid cells stained for (%)							CD4/CD8 ratio
		CD4	CD8	CD16	CD25	CD71	HLA-DR*	IFN-γ	
Healthy donors (n = 61)	2716 ± 572	43.6 ± 8.7	27.2 ± 6.3	14.2 ± 6.6	2.4 ± 2.6	2.0 ± 1.7	1.4 ± 1.6	11.3 ± 6.1	1.69 ± 0.4
Seronegative I.V. drug addicts (n = 24)	2933 ± 913	41.3 ± 9.8	31.7 ± 6.7	9.8 ± 6.7	2.6 ± 3.1	3.3 ± 2.7	1.7 ± 1.5	12.2 ± 7.2	1.57 ± 1.3
Seropositive I.V. drug addicts stage II (n = 19)	2280 ± 714	36.7 ± 6.4	34.4 ± 14.9	8.0 ± 4.9	1.8 ± 1.3	3.8 ± 2.7	1.3 ± 0.7	19.6 ± 6.4	1.43 ± 1.2
stage III (n = 18)	2099 ± 902	31.3 ± 12.9	35.6 ± 11.6	13.4 ± 13.2	2.3 ± 3.2	3.7 ± 2.8	2.5 ± 2.1	28.7 ± 9.7	1.02 ± 0.6
stage IV-C (n = 24)	1056 ± 682	12.8 ± 12.5	43.6 ± 15.5	13.5 ± 8.9	3.6 ± 5.5	5.7 ± 5.1	4.2 ± 3.5	36.6 ± 12.1	0.39 ± 0.6

Values are means ± standard deviation. All membrane markers were performed simultaneously on all subjects

* Percentage of HLA-DR-positive T-l lymphocytes (activated T-lymphocytes).

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Prospect of the Clinical Uses of Interferons and Interleukins

PROFESSOR MICHEL REVEL

I would like to take the opportunity to thank Monsignor Angelini for having invited me and my colleague from Israel to participate in this very important Conference, and I cannot but reflect on some of the quotations of the Bible which were mentioned a few minutes ago, especially by Dr. Blattner, who reminded us that Moses made a brass serpent which cured the plague of the Israelites in the desert. In fact, there is a Hassidic rabbi who tells the story that what really cured the people was that Moses erected the brass serpent very high and everybody had to look up to see it. Because people looked up, things became brighter, and they also started to look up at each other, to behave better among themselves, and this is really the reason why the brass serpent was efficient. In addition, we should never forget that Abraham prayed for the people of Sodom: if there had been ten just men, even Sodom would have been saved; so we have to be optimistic.

I would like to tell you very briefly about two aspects of the involvement of interferons (IFN) in AIDS and about other cytokines which may have a role in AIDS. Interferons beta and alpha are the two main types of interferons. Interferons are produced every time we have a virus infection and they play a very important role in protecting our body against virus infection. There are very elegant experiments in animals showing that if one blocks the inferon system by antibodies, animals can die from very small amounts of viruses which normally are not lethal. Interferon also has other effects: controlling the growth of cells and controlling the immune system as well. Therefore, the fact that we produce interferons of different types every time we have a viral infection is a very important part of the responses to viral infection. In AIDS, as I will show you immediately, there is a very strange and profound disturbance of the interferon metabolism.

We will also talk briefly about interleukin 6, which is a new cytokine which could have immunoregulatory activity and be used in AIDS. I will refer to the tumor necrosic factor (TNF) and its role in the pathogenesis of AIDS, along with antagonists to TNF. The tumor necrosis factor is a cytokine made by monocytes, and its main role is to kill cells during the immune process. It is a very important substance because it allows us to get rid of virus-infected cells.

Finally, I will say a few words about 2'-5' oligo A synthetase, which is a way to monitor the amount of interferon in AIDS patients.

The Figure presents a summary of what I am going to say.

The interferons appear to have a role in the pathogeny of AIDS and also the tumor necrosis factor. This morning Professor Montagnier alluded to this point when he said that very few T-cells are actually infected, and we nevertheless see that there is a generalized destruction of the T-cells. In order to explain this, we must assume some mechanism which increases the killing of these cells, and it is now believed that this mechanism starts by the production of a special type of interferon, which is called acid-labile interferon, differing from most types of interferons, which are normally acid-stable. What is very strange and very important about this interferon is that it is found in almost all auto-immune diseases in man. When one finds a high level of this acid-labile interferon circulating in the blood of AIDS patients, one cannot but wonder if AIDS is not an immune disease; it would otherwise be the only exception among many auto-immune diseases where we find the acid-labile interferon.

I do not want to go into too many details about what the acid-labile interferon may be. Some people say it is the product of a special gene made, perhaps, in B-cells, but others say that the acid-labile interferon is just a regular type of interferon associated with inactivators of interferon. Indeed, one does find molecules circulating in the blood of AIDS patients which, when mixed with interferon, cause inactivation at acid-pH. There may be a very complicated situation here. But, in a nutshell, what is important is that this interferon is characteristic of auto-immune disease.

One of the actions of acid-labile interferons is to stimulate monocytes, and, in the presence of bacteria of LPS, these monocytes form TNF. It was demonstrated that monocytes — either infected with virus, such as the macrophages, which are shown in the Figure with HIV, or monocytes with the acid-labile interferon — produce TNF, and TNF, as I stated, kills cells. Therefore, it is quite possible that we have here a loop starting from production of the interferon because of the virus, followed by reaction of the immune system against itself, forming an auto-immune loop. The TNF has another very important consequence: it depresses hematopoiesis, so that AIDS patients have a very low level of hematopoiesis. They do not form normal T-cells and B-cells, and, if they do, they will destroy them. They also lack monocytes and red blood cells because they have a

depression in hematopoiesis One of the possibilities for therapy would thus be to block the effect of TNF, and we shall see that this may be possible

The last point on this Figure is that the lymphocytes which one would like the interferon to protect against the virus seem to have a decrease in the receptor for interferon. In other words, they do not respond very well to the interferon available. This may explain the mystery of why, when interferon is present (and it has been demonstrated in the test tube that interferon is capable of blocking the growth of HIV very efficiently), the virus still develops *in vivo*; this may be because the cells themselves have become quite resistant to the interferon Fortunately, if we inject exogenous interferon, it seems to overcome the inactivators and the low receptors and does protect new cells from being infected by the HIV being released.

I will cover these few points, proving to you that there is interferon in AIDS patients, showing you that exogenous interferon can have some therapeutic effect, and then giving you some hint as to how one could block the effect of TNF.

Firstly, we shall deal with studies showing the presence of endogenous interferon in AIDS patients. In normal heterosexual controls, the IFN test is usually negative. In homosexual men, or asymptomatic patients who are seropositive, one already sees an increase, with wide variation, but about 10% interferon positive. However, when we reach full-blown AIDS, we see 100% interferon positive.

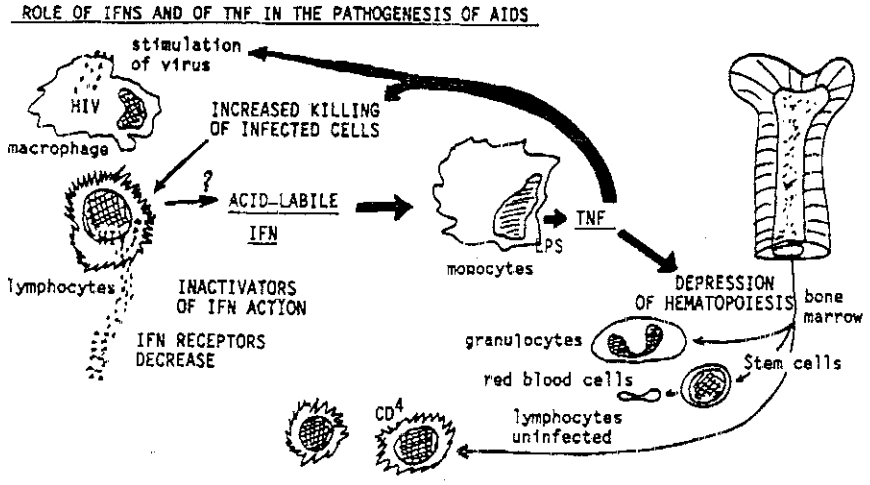
Now I would like to draw your attention to something very peculiar: healthy homosexuals who are seronegative already have interferon in their blood The units of interferon found in healthy homosexuals are much higher in other people with viral infections. Hence homosexuals already produce interferon, and if interferon, as I said before, is a hallmark of auto-immune disease, then maybe there is a process starting long before patients are infected by the AIDS virus. This is something one should really ponder about, for when we speak of high-risk groups, these groups perhaps have some auto-immune process, and when the virus comes in, it just increases that process.

There is another way to monitor the amount of interferon produced in AIDS patients This is by using an enzyme assay developed by us several years ago, called 2'-5' oligo A synthetase. It is a simple enzyme assay and shows that the amount of enzyme found in the white blood cells is very high in AIDS patients and is already elevated in those with ARC (AIDS-related complex), but negative in the control groups

In AIDS the synthetate level is high: over twice the standard deviation in normal individuals. When it is very elevated, we see there is a high incidence of opportunistic infections (pneumocystic pneumonia, Kaposi sarcoma combined with pneumonia, and other opportunistic infections), so that the more interferon there is, the more the patient is in danger of full-blown AIDS and its symptoms. There is a strict relationship between the amount of interferon, or the level of this enzyme measuring the interferon, and the incidence of infections. There is also a decrease in the response to TFN *in vitro*: if one adds interferon to the lymphocytes of the AIDS patient, they do not respond like normal ones. This means that when these patients produce interferon, they actually stop responding to it.

Furthermore, one can almost predict when opportunistic infections will occur from the level of the enzyme. Work by a Canadian group (cf S.E. Read *et al., J. Infect. Dis*, 152, 460, 1985) shows a normal level of the enzyme when the patient first arrived. Ten weeks later he had a very high increase, and almost immediately after that he developed pneumonia. Later the enzyme was again elevated, and he got herpes. This is just one example, but when one sees this enzyme increase, one can almost be sure that there is going to be worsening of the condition.

Now let me briefly tell you about



very promising, recent clinical results of giving exogenous interferon together with AZT. This may sound paradoxical — and it was not tried with much conviction for many years, because interferon is found in these patients, and people asked, "Why give them more interferon?" But, either because the type of interferon we give them is more efficient than the acid-labile interferon that patients make, or because the exogenous interferon is given by another route, the treatment seems efficient. I would like to discuss just a few studies. First, a recently published one (J A. Kovacs *et al., Ann. Int. Med.*, 111, 280, 1989) involving 22 patients with HIV Kaposi sarcoma and treated with AZT (Zidovudine), 100 mg. every four hours, and interferon (5 to 10 million units per day). This regimen is tolerated quite well, although it causes a further decrease in the CD-4 lymphocytes Out of these 22 patients, 6 became HIV culture-negative, so actually they almost became healthy again, having no HIV detectable. Four remained HIV-negative because they were not seropositive at the time of the study, and 12 remained HIV-positive. It is thus promising that a sizeable group within a couple of months became culture-negative. The average remission time was about five months.

Regarding the anti-tumor response for Kaposi sarcoma, 11 of the 22 patients — that is, half of them — responded: one with a complete disappearance of the cancer; ten with a partial disappearance of the cancer; and three with a minor response. Giving interferon combined with AZT seems, therefore, to be rather promising for improving the results that one can get with the antiviral drug.

Another study was done with a high dose of interferon alpha (50 mega-units a day) at the Sloan-Kettering Cancer Center in New York (S. Known *et al.*). In 34 patients, 8 had a complete disappearance of the Kaposi sarcoma, and 5, a partial response. Now a study with lower interferon doses combined with AZT is under way, with very similar results also showing that patients who have responses in cancer are usually the ones without endogenous interferon. Once again, when there is a high interferon level in the patient, giving exogenous interferon may not be so efficient, and one should start treatment very early, when the endogenous interferon level is still low.





The data illustrate the disappearance of the P24 HIV antigen. The patient received AZT from minus 8 weeks on, for example, in one case, and from the start of interferon treatment one can see the clearance of the antigen. Sometimes two courses of interferon were needed. These results are very impressive because we observe the virus disappearing and seem to be doing something really useful for these patients.

I would also like to mention that, unfortunately, these effects are transient, and usually last for 4 or 5 months, after which the CD-4 cells decline. Not only do lymphocytes fall, but the virus increases again; as we were told this morning, the virus increases in the later stages of the disease. This is not yet a complete cure, then, but it is hopefully in the right direction

In conclusion, exogenous interferon can give 50% remission in Kaposi sarcoma, and in a sizeable number of cases (30%) the virus disappears from HIV-positive patients

Now very briefly let me show that there is a way to antagonize the effects of TNF. We have the results *in vitro* with antibodies to TNF in chronic leukaemia, lymphatic leukaemia (not yet in AIDS). One can stimulate hematopoiesis by giving anti-TNF; hopefully, this can be a way to inhibit the effects of TNF in the AIDS patient, blocking the destruction of the cells I was mentioning and also blocking the depression of hematopoiesis so that the blood cells will form again.

There is another way to do this: by using the cytokine interleukin-6, which has many activities, such as stimulating T-lympocytes to grow (as does IL-2) and be active. IL-6 stimulates monocytes and monocytic differentation. It stimulates antibody secretion by B-cells. It stimulates complement synthesis and has many functions which could be used as an immune-stimulant in AIDS. We are studying very actively this interleukin-6, and I would like to illustrate the differentiation of monocytes. You know that monocytes can be infected by HIV. Interleukin-6 can cause leukaemiac monocytes to differentiate into completely active macrophages with phagocytic activity, as seen from the uptake of latex beads as opposed to control cells. One

can observe these large increases in the number of latex beads being taken up, showing the activation of the macrophage by differentiation. There is also an increase in Mac-1 antigen on the surface of these monocytes. It may thus be possible by giving interleukin-6 to stimulate the macrophages to recover activities which have been destroyed by HIV infection. Hopefully, by combining some of the cytokines I have discussed it will become possible to provide help for people who have developed the disease. We must remember that even if we have a vaccine, the vaccine is not the complete answer. We still have many cases — especially very difficult cases — of people who have been refractory, who have contracted the disease despite the vaccine, and for these cases we have to develop therapies. I believe that devising treatments combining cytokines, like interferon-alpha, interferon-beta, interleukin-6, and anti-TNF, with antivirals, like AZT and other (about which Professor De Clercq will speak to us tomorrow), represents a very important activity at the moment in AIDS research. Thank you.

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Information on Progress in AIDS Vaccine Research*

PROFESSOR DANIEL ZAGURY

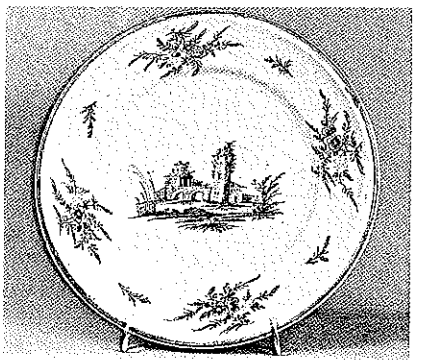
Monsignor Angelini, Mr. Chairman:

I am grateful to you for this invitation to take part in the present meeting on AIDS.

As we all know, in order to protect ourselves against various infectious diseases, whether these are of bacterial origin, like diphtheria, tetanus or tuberculosis, or of viral origin, like smallpox, hepatitis B or influenza, vaccines exist. These vaccines act by reinforcing the specific immunological defence mechanisms against the corresponding pathogenic germs. From this point of view, the purpose of an anti-AIDS vaccine should be to promote the immunological defence mechanisms against the virus responsible for the illness, namely HIV, having two specific goals or possible applications, namely: to prevent the infection of uninfected seronegative persons, and to prevent the further spreading of HIV in the organisms of already infected or sick persons, thus blocking the evolution of the AIDS disease. Several groups in the United States, Great Britain, Switzerland, France and Zaire are now working in this direction of searching for an anti-AIDS vaccine for application in man.

This afternoon I would like to talk to you about our research carried out in the framework of international cooperation and based on various groups: in the United States, with Professor Robert Gallo, Professor Bolognesi and Professor Koprowski of the Wistar Institute; in Zaire, by general practitioner Salin and by Professor Lourouma; and finally in France, by Dr. Picard and my own group, and to illustrate briefly the various stages which we hope will lead to the discovery of an anti-AIDS vaccine.

In fact, in the basic work we carried out with Robert Gallo, we saw — as the speakers mentioned this morning — that the virus incorporated into the lymphocyte remained silent without any outward signs of its presence. However, once it is activated by the antigen, this lymphocyte will differentiate, producing immunological substances such as IL 2 or gamma interferon. But also as a result of the incorporation of the virus, other viruses will be produced. And this production of virus will lead to a fresh cycle of infection, to the production of new T4 cells and new lymphoctytes. And thus we see the creation of the vicious cycle which is



destined to spread the virus to the whole organism, giving rise to the AIDS syndrome. To destroy an infected cell and react against the virus in the organism, the immunological mechanisms may be of two types. They are induced either by signals coming from the virus itself — as you see here — or else by cells which have been infected by the virus and which, once the cells have been activated, will show signs of the virus on their surface.

We chose to develop this cellular immunity for the following reasons: first of all, the direct administration of virus proteins may be dangerous in the sense of leading to immunosuppression, since it will have the effect of paralysing the immunological defences and thus preventing the organism from reacting. Already, the administration of these products of the virus to animals showed that they induce a reaction specific to the virus injected. I will explain what I mean more clearly. It was said earlier that this virus was liable to undergo important mutations, and that several different viruses existed: A, B, C, D ad Z. When we immunize with a virus based on products of the B type virus, it is true that we can create antibodies against B, but not against C, D or Z. And the third reason is that, by acting through the alternative cell pathway, on the one hand, we will be inducing T helper cells which will increase the humoral response which could become broader comprising viruses B, C and Z. But at the same time, we are going to unleash another weapon possessed by the organism, namely the appearance or rather the generation of killer cells, which will destroy the cells carrying a viral

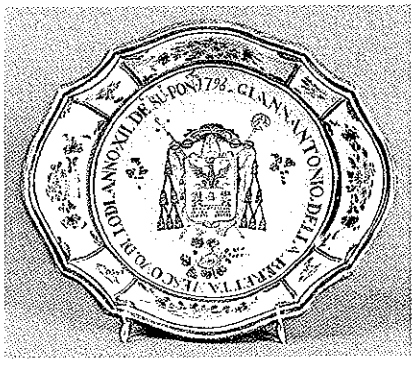
signal. Accordingly, we deliberately chose this alternative.

Is this type of cell immunization possible? The basic work we carried out once more with the N.C.I. group showed that, by activating an infected byt as yet silent cell, which does not display in its envelope or membrane the signs of infection and which is at this stage untouchable, which is not recognised, by such activation of the cell, after various stage of differentiation, we ended up with the expression of the virus and the death of the cell, but when it was already too late. Too late because the viruses have already been produced and will soon be infecting a new wave of virgin cells. However, we realized that, in the course of this differentiation, before release of the virus, there was a stage when the virus appeared at the level of the infected cell; so that there were a number of antigenic signals which were fundamental and crucial for the immunological defence reaction and crucial for mobilising and inducing the defence cells to differentiate and crucial at the active stage of the destruction of these cells. Because the defence cells are capable of recognising and killing this cell, but not those without signals.

Accordingly, we adopted a strategy based on all possible means which enabled us to show up the viral signals at the level of the cell membrane. One way we can do this is to infect the cells of an organism sampled in vitro, in the laboratory, with viruses expressing HIV signals: this is done by using either HIV viruses or viruses of the vaccine to which and HIV gene has been added, in such a way that the infected cells show signals of such a virus.

Another alternative is to carry out this laboratory experiment in vivo on organisms themselves, injecting the vaccine carrying HIV signals which we will now call the recombinant vaccine; and in the organisms this vaccine infecting cells will cause the cells to display the signals of HIV. In fact, we have noted that, in vivo, in animals: in Cercopithecus monkeys first of all and also in chimapanzees, these immunizing vaccine preparations whether the recombinant vaccine or the cells infected in vitro and previously infected and fixed so that they maintain the signal without multiplying accordingly — we have seen that these preparations were harmless and that they led, in the case of monkeys or nonhuman primates, to an immunological reaction.





So that the stage in man was open to us. The first question of course is: whether these preparations which are harmless in animals will necessarily be so in man too?

And so it was that, general practitioner Salin, Professor Lourouma, and I decided to undertake a first experiment based on twelve volunteers who have all received the recombinant vaccine as first vaccination. Then, since this recombinant vaccine induced a quite slight and weak immune reaction, we decided to give it a boost and, at this point, we divided the volunteers into four groups and above all, we gave the individual D Z otologous cells, that is, cells infected by the fixed recombinant vaccine.

At a first stage, the clinical and biological trial showed that all the immunizations carried out on these twelve volunteers failed to indice any signs or symptoms. Above all, the defence cells, the T4 cells, which are so important in the defence mechanisms throughout the immunization of individual D Z here, but also for the other too, were quite normal and even slightly improved, as also was the production of growth factor.

The question still remains, however, as to whether this immunization, which undouibtedly proved harmless, had led to any immune reactions leading to a boosting of the defences of the organisms in such a way as to protect it against natural infection and, of course, against the B immunization virus, as well as against the other HIV viruses, that is the group-specific viruses. And we were able in this way to identify a prototype candidate vaccine. This was accomplished thanks to laboratory tests and analyses aimed at studying the immunological reaction, first of all of the serological responses, the presence of antibody and finally the cell-mediated reactions.

The antibody reaction to the Elisa test shows that antibodies appeared immediately following the first booster injection, and that after the second and third ones, it is very high. By referring to the time abscissa, we can see that the antibodies are becoming progressively stronger so that, even now, two and a half years after immunization, we can say that individual D Z still possesses HIV anti-envelope antibodies.

These antibodies are protective, and by this I mean that, in vitro, in the laboratory, when we infect T4 lymphocytes with the virus, an infection is produced. Well, this infection can be stopped by pretreatment of the viruses with serum from D Z even with proportions of serum in the region of the hundredth, which implies a powerful reaction. In the same way the infection of macrophages is clearly reduced by pretreatment of the viruses with serum from D Z.

Side by side with the antibody reaction, we also have a cell-mediated reaction. This means that the cells in the laboratory, placed in contact with the HIV of immunizing strain B, will proliferate. However, we can also see that this proliferation response exists for the RF strain very far removed from strain B and that even, although to a lesser extent, but significantly and clearly still, for HIV 2 which Mr Montagnier referred to just now.

Now, besides this cell proliferation response, there is also a cell killer response. This means that, when we put cells from individual D Z in contact with their own cells, covered with viral antigens — in this case antigen P 18 — there is vast destruction of these target cells expressing the HIV signal. While, of course, the controls do not show anything.

And, even in vivo, when we give 20 micrograms intradermally to the immunized individual D Z, we obtain an immediate hypersensitivity response, which of course is not present in the nonimmunized control individuals; while this immediate response is later followed by a delayed hypersensitivity response, which is not quite so powerful, but very clearly present all the same.

If we consider that a candidate vaccine is a harmless preparation clearly leading to a group-specific immunological response covering all the various strains of HIV, then we can say that the preparation and the protocol, namely: first of all vaccinaton with a recombinant vaccine, then a booster vaccination with cells infected by the recombinant then fixed, is a suitable candidate vaccine. It goes without saying that this candidate vaccine can scarcely be administered to thousands of individuals, since it is not feasible to take cells from thousands of individuals, to treat them and then to re-inject them. But we know that it is possible to have a candidate vaccine offering certain levels of protection against HIV in vitro. Would it be possible, however, to obtain a candidate vaccine for mass use? That is to say, a candidate vaccine causing the same immune response as D Z, but which is easy to administer?





In the last eight months, together with Robert Gallo, Bolognesi and Koprowski and Dr Picard, we have set up a pilot trial at the Saint-Antoine Hospital in Paris, and in fact today we are in a position to state that we should be able to arrive at such a candidate vaccine for mass use. This candidate vaccine should have as its main signal viral envelope antigens, but should also use the other HIV proteins which play an important part in increasing the global immune response, first of all, and thereafter in producing new killer cells to destroy the targets expressing HIV.

At the present time we are at the stage where we are trying to optimize this immunological reaction, to optimize this candidate vaccine for mass use. However, once we have optimized this candidate for mass use, we will still have to carry out a clinical trial on a large number of individuals to see whether the level of immunological protection afforded by this candidate vaccine is sufficient to ensure protection against the natural infection.

Before undertaking any mass clinical trial based on several hundred individuals, certain scientific and administrative constraints arise. At the scientific level, of course, we will have to make sure that what we are doing does not imply any real risk, that is to say, that the antibodies produced by the candidate vaccine afford protection both against any infection of lymphocytes and also of the macrophage maonocytes, as the speakers this morning quite rightly emphasised. We also want to be sure that we have a sufficient quantity of killer cells to destroy the cells infected by HIV, and we likewise have to be sure that, in primates, that is chimpanzees with HIV 1 and also Macacas which represent an animal model at the present time, which can be infected by a closely related virus, SIV, our preparation, our candidate vaccine also affords protection against retroviral infection.

In any case, it goes without saying that we have to find very shortly, and hopefully within the next year or two,

a candidate vaccine capable of ensuring such protective effects, and this can only be done by using volunteers whose level of infection will necessarily be high. We have already identified a population of individuals who are well disciplined, well followed from a medical point of view and which has a high level of HIV infection. This population is suitable and appropriate for such a clinical trial.

Of course, side by side with the various scientific constraints, there are also indispensable administrative conditions. Firstly, such a trial must be carried out in the framework of international cooperation, of which the essential kernel already exists. And also, if such a trial is undertaken on an African population, a parallel trial should be carried out in France, of course on the basis of the full agreement, indeed with the help and participation of the local authorities. It goes without saying that this type of trial, which constitutes an important operation — like all the earlier trials we carried out on man — should receive the approval of the National Ethic Committees concerned in France or in Africa. And, since the World Health Organization (W.H.O.) has taken up the AIDS problem, clearly its support will be indispensable for this operation.

In conclusion, from this scientific point of view, certain technical procedures are involved with a placebo group, that is, a control group which will receive the preparation and volunteers who will be required to give their informed consent and with recommendations for prevention, including the possible handing out of prophylactics; while all of this will be accompanied by a follow-up of viral infection, based on classic analytical methods.

Monseigneur, I wish to thank you once more for having involved me in this meeting on AIDS, considered in all of its various aspects ranging from medical to human, social and moral. Because AIDS, which — as I am sure you will agree — is our only target here, must be overcome. And we will only be able to dominate it on the basis of solidarity and respect for the identities of all cultures. For AIDS is a worldwide scourge which, if it is not conquered everywhere, will not be wiped out.

Professor DANIEL ZAGURY
Director of the Cell Physiology Laboratory Pierre and Marie Curie University, Paris

* This lecture was transcribed from a tape recording without having been reviewed by the author.



Pediatrics and AIDS

PROFESSOR WADE P. PARKS

AIDS is a disease and a problem with multiple dimensions. Today I will present the point of view of a pediatrician. It is obvious that AIDS is not a disease that belongs to anyone or any one group. AIDS is not a disease just of male homosexuals, IV drug abusers, or even children. AIDS is a disease that belongs to our entire society, and in fact all elements of that society must work together to achieve a solution to the problems posed by both the infection and the epidemic. In order to achieve that control, it is essential to recognize and accept several critical points of view.

First, in the more industrialized areas of the world today, an infant has a 99% probability of surviving past two years of age. People today have come to regard the right to a healthy child as one of the cornerstones of modern medicine. Less than a hundred years ago, however, the proportion of infants that survived to their second birthday was less than 90%. In fact, worldwide, there remain areas where this measure of infant mortality is close to 50%. This means that one child dies out of every two children that are born. Given such a broad range of infant mortality rates, can we achieve further improvement, perhaps to a level where 999 children out of a thousand survive? Already today, in some settings, with optimal medical care to both the mother and child, such rates are being approached. The future is promising for continued reductions in infant mortality. However, it should be recognized that further improvements in survival may be adversely affected by the AIDS epidemic, which now threatens many areas of the world. Thus, even areas that think that they have little or no serious problems must recognize that we all share in this worldwide epidemic.

Second, AIDS can be viewed as analagous to syphilis or gonorrhea or other sexually transmitted diseases except for the following. AIDS has a very high mortality and there is no medicine that can be used to treat AIDS that is comparable to penicillin, used for treating syphilis and gonorrhea. Like all sexually transmitted diseases, there are consequences to the infants exposed to infection as a result of being born to mothers infected with the AIDS virus. Syphilis can infect the neonate and cause a number of abnormalities. This is the reason that all women who are pregnant are screened for syphilis in the world today. Gonorrhea is so prevalent that all infants that are born receive silver nitrate eye drops to prevent the consequences of gonorrhea infection in the eye. Why, then, do we not test women for HIV-1, the AIDS virus, in settings where more than 1% of the women are infected? Ironically, we have reached a point where there is clear understanding about HIV or AIDS infection in women and children, and yet we are unable to act on that knowledge.

This slide shows that STD's such as syphilis and gonorrhea have remained very stable in the three year period shown from 1984-1987. In contrast, AIDS tripled in incidence and thus satisfies the definition of an epidemic. This remarkable increase has been described by others at this conference and is remarkable not only for its rapid rate of increased but also its focussed geographic and demographic distribution.

In a selected group of 7 areas in the United States AIDS actually exceeds the incidence of syphilis in many areas, but the increase in AIDS incidence in the United States today has made AIDS a far more common disease than syphilis. And syphilis has terrorized populations for centuries. As you have heard, AIDS is likely to increase as well as to spread to other areas. What is of significance, however, is that areas with a high incidence of sexually transmitted diseases contain the majority of the total incidence of AIDS virus infections in the United States.

In these 7 areas that I have just showed, 74% of the total incidence of syphilis is contained in these areas. Likewise almost 70% of all cases of AIDS are restricted to New York City, New Jersey, Washington, DC area, Georgia and Florida, Texas and California. These areas have the highest incidences and reflect the distribution of sexually transmitted diseases in selected geographic areas, particularly in urban environments and within urban environments in lower socioeconomic populations. This is of particular importance for Pediatric AIDS for the following reason: one notes a remarkable coincidence between the incidence of infection in both males and females and in children. Obviously, the incidence of congenital syphilis, the consequence of an infant being born to an infected mother, is much lower than the actual incidence of syphilis. But, particularly, it is important to remember that sexually transmitted diseases occur in the same populations that bear children. This remarkable correlation with syphilis between the incidence of disease in women also holds for HIV and AIDS in children. This is not a unique situation for syphilis and AIDS.

There are a large number of infec-

tious diseases of women that have been known for centuries and are well known to pediatricians that can infect their offspring. This infection occurs either during the course of pregnancy or during the birth process or perhaps by milk transmission.

To this list we can now add in fact what may be the prototypic maternal-fetal infection with HIV that eventuates in AIDS in children. As indicated earlier, the distribution of Pediatric AIDS closely follows the incidence not only of HIV in AIDS in adults, but also is localized in urban areas. Pediatric AIDS has closely mimicked the distribution of all AIDS in the United States

If one looks at this more closely one can note that even in a city like New York there are focal areas of transmission of AIDS. In New York, where I just moved, there is a realtively high distribution of AIDS cases in the Bronx and in Manhattan and in parts of Brooklyn. These are the same areas that have the highest sexually transmitted disease incidence, and, sure enough, when we then measure the incidence of HIV infection in women who are giving birth in New York City, the Bronx, Manhattan and Brooklyn, show the highest incidence of HIV infection in the women, and note that these incidence is now approaching 2% among all children who are born in New York City. This is not unique to New York City. Incidence in major city-county hospitals on the Eastern seaboard now ranges between 2 and 5% of all women who deliver children in those hospitals. There is no question that there is a very great exposure of infants now being born in the United States, particularly on the Eastern seaboard, to HIV infection and potentially becoming infected with the virus and developing disease Demographics shows that over half the women are African-American and a third are Hispanic. Intravenous drug abuse is an element in over 60% of all cases of Pediatric AIDS.

Of the first 19 mothers that we described as being positive for HIV and who were identified *by having delivered a child with pediatric AIDS*, only 1 had had any clinical disease, and she had developed tuberculosis during her pregnancy. However, all the others were not diagnosed clinically as having any disease. Thus, women who have the potential for delivering children with AIDS are usually clinically well, and, most important, they do not know that they have AIDS virus infection.





The next important point is that these women go on to develop a typical course of HIV infection with declining CD4 cells and eventually develop symptoms and die. Frequently, they leave households of children without a mother. Finally, there is no consistent pattern of transmission. A woman may deliver an infected baby followed by an uninfected baby; or, she may deliver three infected babies. There is no predictable pattern that we have been able to identify to date and we have no insight into the probability that one mother versus another virus-infected mother will transmit the HIV infection to their infants. In order to determine more precisely the rates of transmission from women who are infected to exposed infants, we have conducted a prospective study in Miami.

A prospective study is an investigation where all women who are infected in a population are enrolled and their infants are then followed to determine if they are infected. This allows us to determine, first, the proportion of infants that are born to the HIV infected women who are themselves infected. In other words, if 100% of infants are infected, one has one set of circumstances; if only 1% are infected, there is an entirely different outcome. The second purpose of the study was to determine the proportion of infected infants thet developed clinical symptoms that are associated with the HIV-1 infection and to determine the clinical outcome of these children. I will not go into great details about the study, but basically can tell you that 33% of the women in the series that we have studied have delivered infected infants. This rate agrees with multicenter studies that are being conducted collaboratively in Europe as well as with other large studies in the United States that are finding between 25 and 35% transmission from infected women to their offspring. The major technical problem has been to define infected infants at about 3 months of age in order that earlier intervention might be possible. We use virus isolation, but this is not widely available. The most important predictive factor in infants is the same as it is adults. It

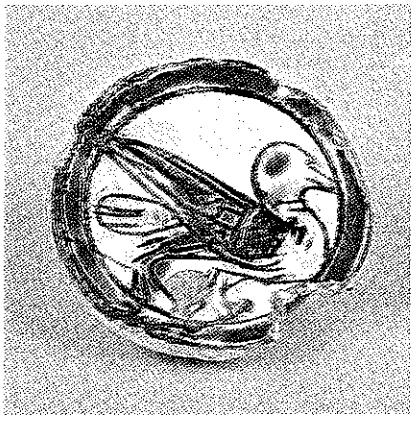
is the relative loss of CD4 positive lymphocytes This is the one factor that correlates most highly with the probability that a given infant is infected. We believe that the infants who are not infected with HIV, the two-thirds of infants born to the infected mothers, are well and will have a normal lifespan. There are others who consider these children to be at continued risk. However, we believe there is no significant evidence for such a view in our experience. Obviously, either diagnosis is very important.

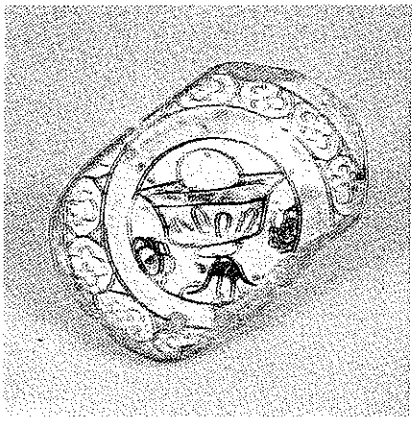
Using our definition of infected (based on virus isolation) and uninfected there is a marked difference in the decline in antibodies to the virus in the infants without HIV isolation and in the infants that are infected. In fact, there is a decline in the antibody that the infant receives from the mother. The fact that the mother's antibody is passed to the child normally makes conventional diagnostic procedures not possible during the first few months of the infant's life. Early diagnosis can allow early treatment and intervention

Coincident with the development of antibody to the virus is the development of increased immunoglobulin in the infected infants which correlates with immunologic dysfunction. Laboratory abnormalities occur very early in infected infants. The uninfected infants born to infected mothers develop normally. This is of importance in looking at what happens clinically.

It is our experience and the experience of others nationally in the United States that approximately 50% of all infants who have HIV infection will develop clinical disease in the first 12 months of life. Another 25% will develop disease in the second year of life and the remaining 25% will not develop disease until after 2 years of age. The types of disease that one sees are unique to Pediatrics. Pediatric disease associated with HIV infection is both similar and markedly different from that seen in adults. In adults clinical disease is seen very late, but because children experience infections differently than in adults, they have very different outcomes.

In a child with a common childhood infection called Molluscum Contagiosum, we may find a very unusual distribution on the face and around the eyes. The types of infections, that one sees that are unique in children or are very uncommon in adults are recurrent bacterial infections and the most common clinical condition of children is a disease of the lungs called LIP. There is also cardiomyopathy and renal disease. These patterns are unique to children.





LIP children may become oxygen dependent and may require living with a cannister of oxygen. On the other hand, children may have even more serious outcomes with a much increased mortality. The most feared infection in children, although not commonly seen, is Pneumoncystis Carinii pneumonia. What then happens to these children that develop clinical disease?

A survival analysis that will soon be published from our series in Miami involves a study of 176 children who have been carefuly followed throughout their course and shows a 50% mortality by the first two years of life. This is a very high mortality, higher than any other setting associated with AIDS virus infection.

The analysis of the survivors beyond even 5 years of age indicates by a proportional hazards model that although there are long-term survivors there is no evidence that there will be people who survive HIV infection. In other words, these children remain at high risk for death associated with HIV infection. Of great importance is whether the children present with clinical disease before or after the first year of life. Children that present in the first year of life with clinical disease show a marked rapid decline and then this levels off a little bit, but still continues downward in terms of survival.

So in summary I've presented evidence that this is a sexually transmitted disease, transmitted from the mother to the child, frequently by a mother who does not know that she is infected and is clinically well and would only be identified by testing. *To pediatricians, that this is not just a pediatric disease but very much an obstetrical disease* Also that the infection occurs commonly 33% of the time, presents very early in life in the majority of children and is associated with an incredibly high mortality. AIDS mortality in children exceeds the mortality seen in our country with diseases as frightening as childhood leukeamia Consequently, we are in

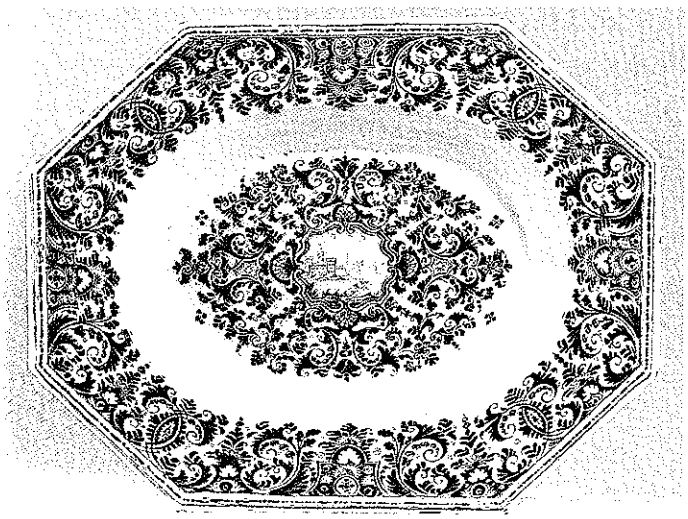
a situation where we are dealing with a very serious, high mortality infection occurring in lower socioeconomic group individuals in our country and not just in IV drug abusers. What, then, are the potentials for intervention? We have the usual triumverate: counseling, chemotherapy and immunoprophylaxis or vaccines. I will not discuss the latter, as it will be dealt with in other areas.

I think that counseling has been underestimated in its effectiveness. Recommending counseling here is like carrying coals to Newcastle. But there are problems with counseling, particularly the targeting problems and the fact that we are dealing frequently in cross-cultural situations with IV drug abusers or individuals of different backgrounds from those of the health care providers. The overall goal of counseling is not an absolute goal of prevention, but a partial goal to reduce risk.

Targeting is a concept well-known in counseling of identifying at risk groups. The reality is that individuals who are at risk seldom interface effectively with current medical care delivery systems or any other type of care delivery system. It is very important that adolescents, particularly street and homeless individuals, IV drug abusers, individuals from other countries, perhaps illegal aliens, and prostitutes be recognized as major sources of sexually transmitted diseases and novel creative approaches be taken to identify these individuals and reduce through counseling the probability of spread. This requires close collaboration with epidemiologic investigators and the obtaining not of prejudicial information but carefully obtained scientific objective measures of infection in these populations. This must mean wider testing for HIV, which is then tied to specific inpoints of evaluation in order that we can determine what is happening over time in these populations. These populations are those that we have not studied well to date.

Chemotherapy is important. Let me say, first of all, that AZT treatment is not that effective in pediatric AIDS to date. That may be a problem with late delivery or it may be a problem of a less effective drug in children. At the same time, if something is not done to prevent transmission from mothers to children, pediatricians will be handed infected infants and expected to put them on toxic chemicals for the remainder of their life. A far more rational utilization would be to use chemotherapy to prevent transmission from the mother to the child. We have begun such studies in the United States in an attempt to identify mothers and then use drugs to prevent transmission. This should be expanded in order that we can evaluate the actual need for such intervention on a wide scale and put in place the programs that would break the cycles of transmission, as we do with syphilis.

Professor WADE P. PARKS
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Prospects for the Chemotherapy of AIDS

PROFESSOR ERIK DE CLERCQ

1 Introduction

The identification of a human retrovirus, HIV (human immunodeficiency virus), as the etiologic agent of AIDS has prompted the search for inhibitors of HIV replication. To the extent that HIV replication is involved in both the initiation and progression of the disease, one may expect that those compounds that inhibit the replicative cycle of HIV also suppress the pathogenesis of AIDS and its clinical manifestations. Based on this premise, suramin (Fig. 1) was the first anti-HIV agent to be used in the treatment of AIDS. Suramin had been recognized as a potent inhibitor of retrovirus-associated reverse transcriptase (1), which led Mitsuya and his coworkers to evaluate its inhibitory effect on the infectivity of HIV *in vitro* (2). The compound proved inhibitory to the cytopathic effect of HIV at drug concentrations which were not toxic to the host cells (2), and this observation has been confirmed in several cell systems (3,4). Suramin was also the first anti-HIV agent found to be capable of inhibiting HIV replication in AIDS patients (5). However, a short-term (6-week) treatment course with surami did not lead to an either clinical or immunological improvement (5), and, upon prolonged treatment, suramin proved rather toxic (6), so that its use as single-agent therapy for AIDS is not recommended.

Shortly after suramin, 3'-azido-2',3'-dideoxythymidine (azidothymidine, AZddThd, AZT) (Fig. 2) was discovered as a selective anti-HIV agent (7), and, as AZT appeared to be superior to suramin in both potency and selectivity, it was promptly introduced in the clinic (8). A short-term (6-week) treatment of AIDS patients with AZT led to clinical, virological and immunological improvement (8) and, consequently, AZT was submitted to a double-blind, placebo-controlled trial which, in turn, indicated that following a 24-week treatment preiod with AZT, there was a significant decrease (delay) in mortality and reduction in the frequency of opportunistic infections (9). However, the long-term administration of AZT is associated with severe toxicity, in particular bone marrow suppression (anemia, leukopenia) (10), and the initial immunological improvement, i.e. increase in $CD4^+$ cells after the first few weeks of AZT therapy, appears to be transient (11): by 6 months of AZT therapy, $CD4^+$ cell counts have returned to their pretreatment levels and further decline despite continued AZT treatment. The immunologic deterioration of AIDS patients while on AZT therapy may be attributed to various factors: i.e. accruing toxicity of the compound for the hemopoietic system, intrinsic inability of AZT to prevent $CD4^+$ cell destruction, and emergence of drug-resistant HIV variants (12).

Further search for effective inhibitors of HIV replication has led to the discovery of a variety of 2',3'- dideoxynucleosides (Fig. 3) [i.e. 2',3'-dideoxycytidine (ddCyd), 2',3'-dideoxyinosine (ddIno) (13)], 2',3'-didehydro-2',3'-dedeoxynu-cleosides [i.e. 2'-3'-didehydro-2'3'-dedeoxycytine (d4Cyd), 2',3'- didehydro-2',3'-dideoxythymidine (d4Thd) (14-18)], 3'-fluoro-2',3'-dideoxynucleosides [i.e. 3'-fluoro-2'3'-dideoxythymidine (FddThd), 3'-fluoro-2',3'-dideoxy-5-chlorouridine (FddClUrd) (19-23)] and various 3'-azido-2',3'-dideoxynucleosides other than AzddThd [i.e. 3-azido 2',3'-dideoxyuridine (Azd-

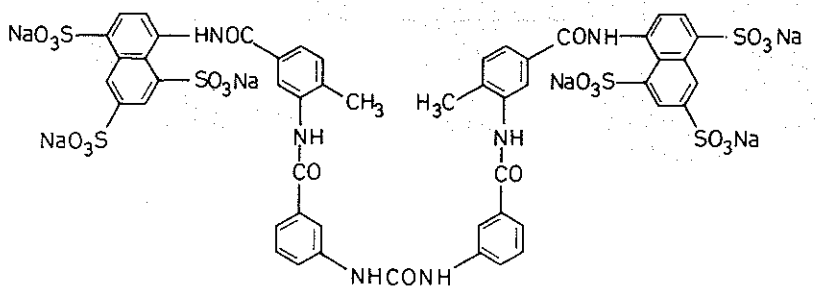


Fig. 1 Suramin

dUrd), 3'-azido-2'3'-dideoxy-5-chlorouridine (AzddClUrd) and 3'-azido -2',3'-dideoxy-2,6-diamino- purineriboside (AzddDAPR) (24-26)]. Some of these compounds, i.e. ddCyd (27) and ddIno (28), have already been submitted to clinical trials. Treatment with ddCyd (for up to 15 weeks) and ddIno (for up to 42 weeks) leads to an improvement of both the immunological (increase in $CD4^+$ cell counts) and virological (decrease in viral p24 antigen levels) parameters. However, the clinical usefulness of ddCyd is limited by peripheral neuropathy, while for ddIno the dose-limiting toxicity still needs to be defined

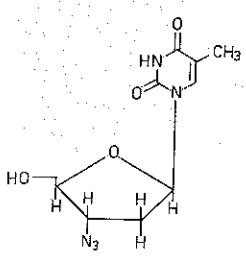


Fig. 2. Azidothymidine

Although Steady progress has been made in the search for effective chemotherapeutic means against AIDS, it is obvious that our efforts must be continued and even intensified, if we want to prevent initiation or suppress progression of the disease in the patient. To this end, several strategies could be envisaged. They are based on the different targets in the virus replicative cycle with which anti-HIV agents could interact (Fig. 4). In addition to the reverse transcriptase, which serves as target for the 32',3'-dideoxynucleoside analogues, various other targets could serve as sites of chemotherapeutic attack: i.e. adsorption of the virus particle to the cell membrane, uncoating of the viral capsid, integration of the proviral DNA into the cellular genome, processing of the viral precursor proteins, and assembly and release ("budding") of the viral progeny particles. Those compounds that interact at different targets may show synergistic activity when combined, and even those compounds that interact with the same target enzyme (i.e. reverse transcriptase) but differ in pharmacological or toxicological behavior may profit from combined or alternating use, and such procedures, while maintaining efficacy, may allow us to reduce the drug dosage and thus diminish toxicity.

2. Reverse transcriptase inhibitors

AzddThd, ddCyd and all other 2',3'-dideoxynucleoside analogues are assumed to be targeted at the reverse transcriptase step, where they can act in a dual fashion (Fig. 5), that is, as either competitive inhibitors with respect to the natural substrates (dTTP, dCTP, dATP, dGTP) or alternate substrates thus leading to the premature termination of the growing DNA chain (29, 30). Both processes lead to the shut-off of viral DNA synthesis, but it is not clear which of the two processes is the more important. Whatever the precise mechanism by which 2',3'-dideoxynucleosides inhibit retroviral DNA synthesis, the 2',3' -dideoxynucleoside 5'-triphosphates exhibit a much greater affinity for the viral reverse transcriptase than for cellular DNA polymerasea α or β (31). This differential affinity may obviously contribute to the selectivity of the 2',3'-dideoxynucleoside analogues as anti-HIV agents, but of equal, if not greater, importance may be the rate and extent by which the 2',3' -dideoxynucleosides are phosphorylated intracellularly to their 5'- triphosphates (32, 33).

In view of the shortcomings of AZT in the clinical setting (see Introduction), any new candidate anti-AIDS drug that wants to outweigh AZT has to be less toxic and/or more potent; it should be well tolerated, sustain increased $CD4^+$ cell counts and retain activity against AZT-resistant virus mutants (should the latter be responsible for the clinical failure of AZT, which remains to be established). Very few 2',3'-dideoxynucleoside analogues equal or approach AZT in potency against HIV *in vitro* (34), and those that do so (for example, FddThd, now also referred to as FLT) are more toxic than AZT, thus achieving a lower selectivity index (20). At the other extreme are those 2',3'-dideoxynucleoside analogues (i.e. d4Thd, FddClUrd) that, while less potent, are much less toxic than AZT. These compounds are also less toxic to the bone marrow, which is the dose-limiting factor in the clinical use of AZT.

The precise reason(s) for the pronounced toxicity of AZT for the bone marrow (35) have not been elucidated. This myelotoxicity may be related to several factors. A peculiar feature of AZT is that it leads to an accumulation of its 5'-monophosphate (AZT-MP) in cells that have been exposed

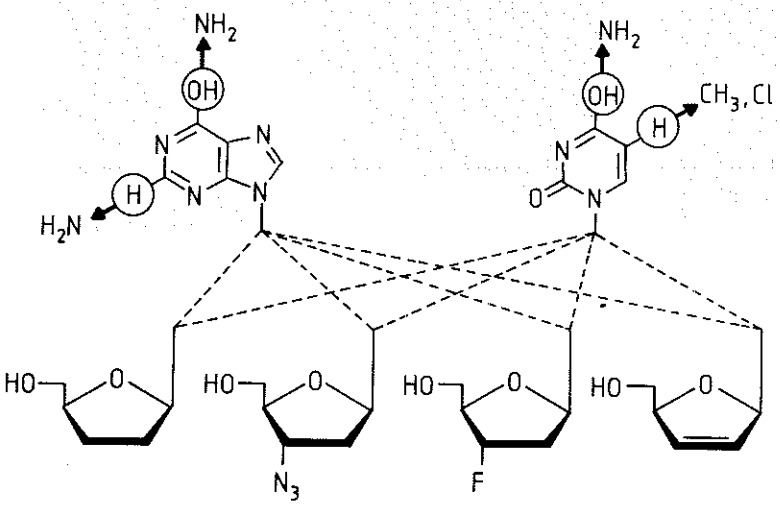


Fig. 3. 2',3' -Dideoxynucleosides

to the drug. AZT-MP accumulates because it is a potent inhibitor of the enzyme (dTMP kinase) that is needed for its further phosphorylation to AZT-DP. The inhibitory effect of AZT-MP on dTMP kinase also results in an interruption of the dThd salvage pathway, a reduction in the supply of dTTP, and an inhibition of host cell DNA synthesis. Compounds such as FddClUrd and d4Thd are not accumulated in their 5'-monoposphate form. These compounds are virtually not inhibitory to cellular DNA synthesis, and much less toxic to the host cells than AZT. To the extent that inhibition of dTMP kinase is causally related to inhibition of host cell DNA synthesis, accumulation of the 2',3'-dideoxynucleoside 5'-monophosphate forms may be considered as a biochemical parameter of toxicity. It follows that those 2',3'-dideoxynucleoside analogues that do not inhibit dTMP kinase (and do not accumulate as their 5'-monophosphate forms) may be therapeutically advantageous because of their lesser cytotoxicity.

The emergence of drug-resistant HIV mutants following long-term treatment of AIDS patients with AZT is an important issue that has recently attracted much attention. Larder *et al.*(12) described such HIV variants exhibiting decreased sensitivity to AZT. Attempts to obtain AZT-resistant HIV mutants *in vitro*, i.e. through repeated passage of the virus in the presence of the drug, have not proven successful. Also, the molecular basis of the diminished sensitivity to AZT of the clinical HIV isolates has not been elucidated (12). If, however, AZT owes its selective anti-HIV activity to a specific interaction with the viral reverse tanscriptase, and if virus resistance to the drug develops, it has to be located at the reverse transcriptase level. Interestingly, the HIV variants that showed diminished sensitivity to AZT, also showed reduced susceptibility to AzddUrd, but not d4dThd or ddCyd. This means that, should AZT-resistant HIV strains become a clinical problem, AIDS patients could be effectively treated with other drugs against which the virus has not (yet) developed resistance.

In addition to the 2',3'-dideoxynucleoside analogues, various acyclic and carbocyclic nucleoside analogues (Fig. 6) have been described which hold great promise for the treatment of retrovirus infections. Of the carbocyclic derivatives, carbovir (carbocyclic 2',3'-didehydro-2',3'-dideoxyguanosine (36) is currently under investigation as a candidate anti-AIDS drug. Among the acyclic nucleoside analogues, adenallene, cytallene (37), and in particular the phosphonylmethoxyalkyl derivatives PMEA [9-(2-phosphonylmethoxyethyul)adenine] and PMEDAP [9-(2-phosphonylmethoxyethyl)-2,6-diaminopurine] (38) have been most intensively pursued for their antiretroviral potential. PMEA is presumably targeted at the reverse transcriptase. The compound can as such be taken up by the cells, and then needs two phosphorylation steps (in contrast with all other nucleoside analogues, which require three phosphorylations) to be converted to its active form. PMEA is more efficacious than AZT in the treatment of murine retrovirus infection (39). It is also effective in the treatment of simian immunodeficiency virus (SIV) and feline immunodeficiency virus (FIV), infection in monkeys and cats, respectively. A particularly attractive feature of phosphonylmethoxyethylpurines (PMEA, PMEDAP,...) is that they are active against both retroviruses and herpesviruses, which implies that they may be useful in the treatment of both opportunistic herpesvirus infections and the underlying retroviral disease. In fact, experiments with PMEA in the murine AIDS model (LP-BM5 virus-infected mice) have indicated that the drug is at least as efficeint as AZT for the treatment of the retrovirus infection and at least as efficient as acyclovir for the treatment of herpes simplex virus infection (40).

3. Inhibitors of virus adsorption

HIV attachment to the cells requires a specific interaction between the viral glycoprotein gp120 and the host cell CD4 receptor (fig. 7). As a rule, it may be stated that only those cells that contain the CD4 receptor can be infected by HIV. Hence, the gp120-CD4 interaction may be viewed as an attractive target for therapeutic intervention. Any molecules that inhibit this interaction may be expected to block HIV infection at the earliest possible event of the virus replicative cycle, that is, the virus adsorption step.

A first class of substances that suppress HIV infectivity through interference with the virus adsorption step are the soluble CD4 derivatives (41-45). These molecules can be engineered, i.e. shortened to those peptide fragments that are involved in the binding of gp120 (46) or fused to immunoglobulin portions so as to increase

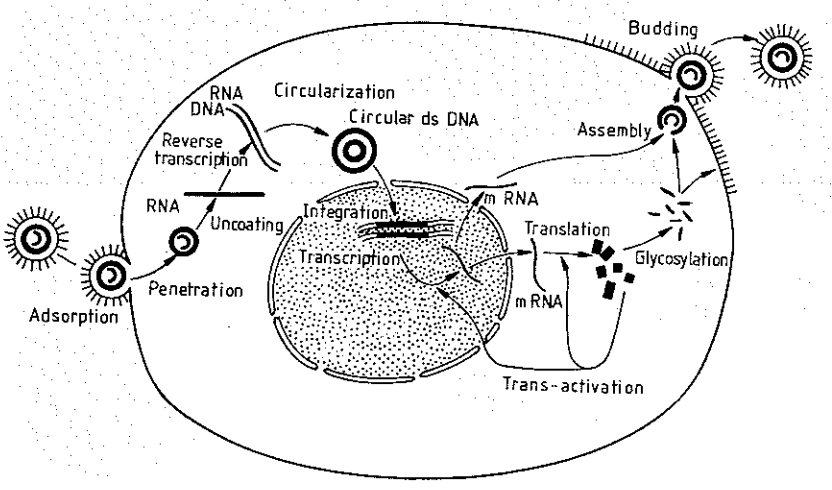


Fig. 4. HIV replicative cycle.

their half-life in the organism (47,48). Soluble CD4 could also be used as a vector for toxins such as ricin (49). Such ricin-CD4 conjugates may be expected to specifically deliver their toxin to those cells that express gp120 (i.e. cells that have been chronically infected with HIV), and, as a consequence, these cells may be specifically killed upon interaction with the ricin-CD4 conjugates (49). The therapeutic value of the CD4 derivatives is currently under scrutiny. A general concern applying to all CD4 derivatives is that, in addition to their effects on virus and virus-infected cells, they may also interfere with the natural immunoresponses involving the CD4 ligand, and, hence, exert immunosuppressive effects *in vivo*. *In vitro*, soluble CD4 does not appear to inhibit human peripheral blood lymphocyte (PBL) responses to various antigenic stimuli (50), but this observation is not predictive of what may happen *in vivo* upon prolonged therapeutic use of CD4 or its derivatives.

A second class of compounds whose anti-HIV activity at least partially resides in the inhibition of virus binding to the cells are the polyanionic compounds represented by suramin, Evans blue, aurintricarboxylic acid, fuchsin acid and glycyrrhizinic acid (34). These compounds may actually act at more than one site of the virus replicative cycle: i.e. reverse transcription, protein synthesis, protein kinase C activity (51) and virus binding to the cells (52). Aurintricarboxylic acid (ATA) (Fig. 8) inhibits virus binding to the cells because it specifically interacts with the CD4 receptor (53). This specific affinity of ATA for the CD4 receptor has been recognized based on the use of different monoclonal antibodies to cell surface antigens: the anti-CD4 mAb OKT4A/leu-3a is the only monoclonal antibody that ATA competes with. This points to the specificity of its interaction with the CD4 receptor. Thus, ATA can be considered as a selective marker for the CD4 receptor and represents a new lead in the development of selective anti-HIV agents.

The third class of compounds that specifically interfere with the virus adsorption process are the sulfated polysaccharides (Fig. 9), or sulfated polymers in general. This group contains a number of compounds, i.e. heparin, dextran sulfate (54), pentosan polysulfate (55, 56), λ-, κ, ι -carrageenans (55), mannan sulfate (57), lentinan sulfate (58), "supersulfated" chondroitin sulfate (59), sulfated bacterial glycosaminoglycan (60), periodate-treated heparin (60), sulfated polyvinylalcohol (PVAS) and sulfated co-polymers of acrylic acid with vinylalcohol (PAVAS) (61) (Fig. 10), that inhibit HIV replication *in vitro* at concentrations that are far below the cytotoxicity threshold. While exquisitely selective as inhibitors of HIV replication *in vitro*, it is as yet unclear whether these compounds are also effective against HIV replication *in vivo*. The sole clinical study that has

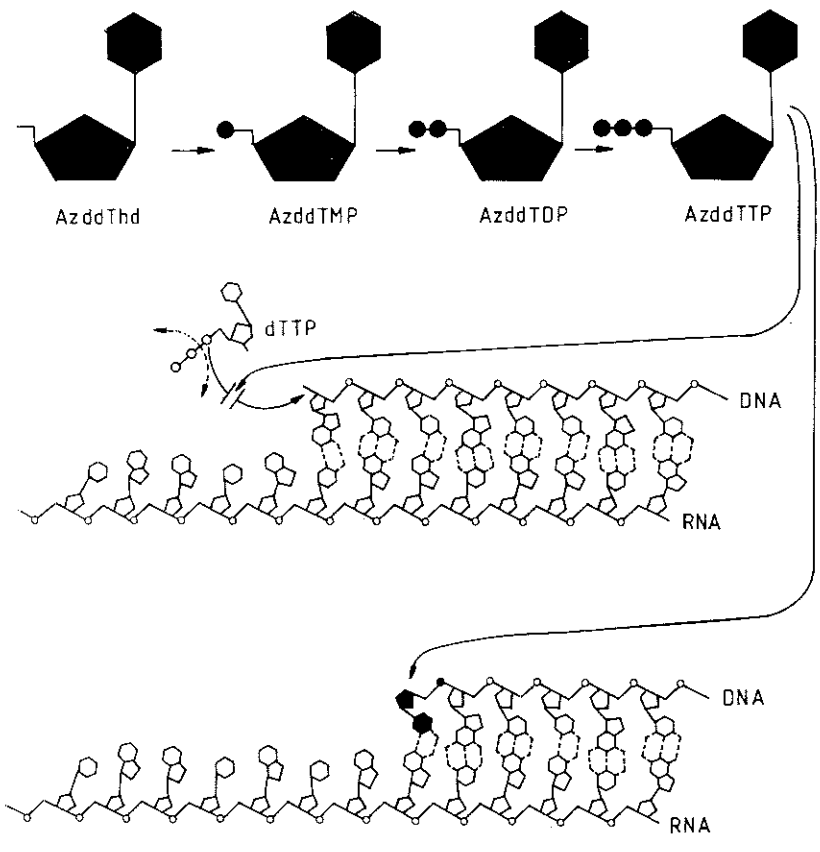


Fig. 5. Mechanism of action of 2',3' -dideoxynucleosides (i.e. AzddThd).

so far been conducted with dextran sulfate (62) did not reveal much benefit, but in this trial dextran sulfate was administered orally, and this is not the ideal route for compounds that are assumed to be poorly absorbed from the gut.

4. Other targets and compounds

In addition to the reverse transcription and virus adsorption step, various other events in the virus replicative cycle have been identified as attractive targets for therapeutic intervention, i.e. virus uncoating (69), proviral DNA integration, viral mRNA transcription and translation, and proteolysis and glycosylation of viral proteins (70). In particular, the viral protease, that is autocatalytically cleaved from its (*gag-pol*) precursor protein and then processes the precursor *gag* and *pol* proteins into mature virion components, has received much attention as a target for protease inhibitors. The rationale behind such approach is that an intact viral protease is required for the maturation of the viral particles and that, if the viral protease is made deficient, i.e. through site-directed mutagenesis, defective virions are formed which are no longer infectious (71). The three-dimensional structure of the HIV-1 protease has been resolved (72,73), and this information should help in designing specific HIV-1 protease inhibitors. Notwithstanding the specificity of the HIV protease, it may prove a difficult task to develop protease inhibitors that do interfere with the HIV protease in its natural habitat, and do so without any harmful effects on host cell proteins.

The development of glycosylation inhibitors as anti-HIV agents even faces a greater problem than protease inhibitors, since there are no specific viral enzymes involved in the glycosylation of viral proteins. Hence, the selectivity of glycosylation inhibitors as anti-HIV agents has to be based solely upon quantitative differences in the glycosylation requirements of viral *versus* cellular glycoproteins. The result of the interaction of glycosylation inhibitors may be similar to that of proteolysis inhibitors, that is the formation of defective virus particles which are no longer infectious. Also, glycosylation inhibitors may interfere with the expression of intact gp120 molecules by chronically HIV-infected cells, and, hence, prevent syncytium formation, and concomitant destruction of target CD4$^+$ cells by HIV-infected agressor cells. Foremost among the glycosylation inhibitors which have been pursued for their anti-retrovirus activity are castanospermine (74,75) and N-butyldeoxynojirimycin (76,77), and clinical studies have been undertaken with the latter. Whether glycosylation inhibitors may have clinical utility is hard to predict. The compounds are relatively weak inhibitors of HIV replication, thus necessitating the administration of large doses, which, even if tolerated, do not seem practical in the long run.

Another interesting approach in the development of anti-HIV agents is based on the use of so-called "antisense" oligonucleotides, originally referred to as "hybridons" (78) "Antisense" oligonucleotides are complementary to a well-defined portion of the viral genome, hybridize with these target sites and thus block transcription and/or translation of the viral RNA. Experimental evidence suggests that antisense oligodeoxynucleotides are indeed capable of blocking HIV

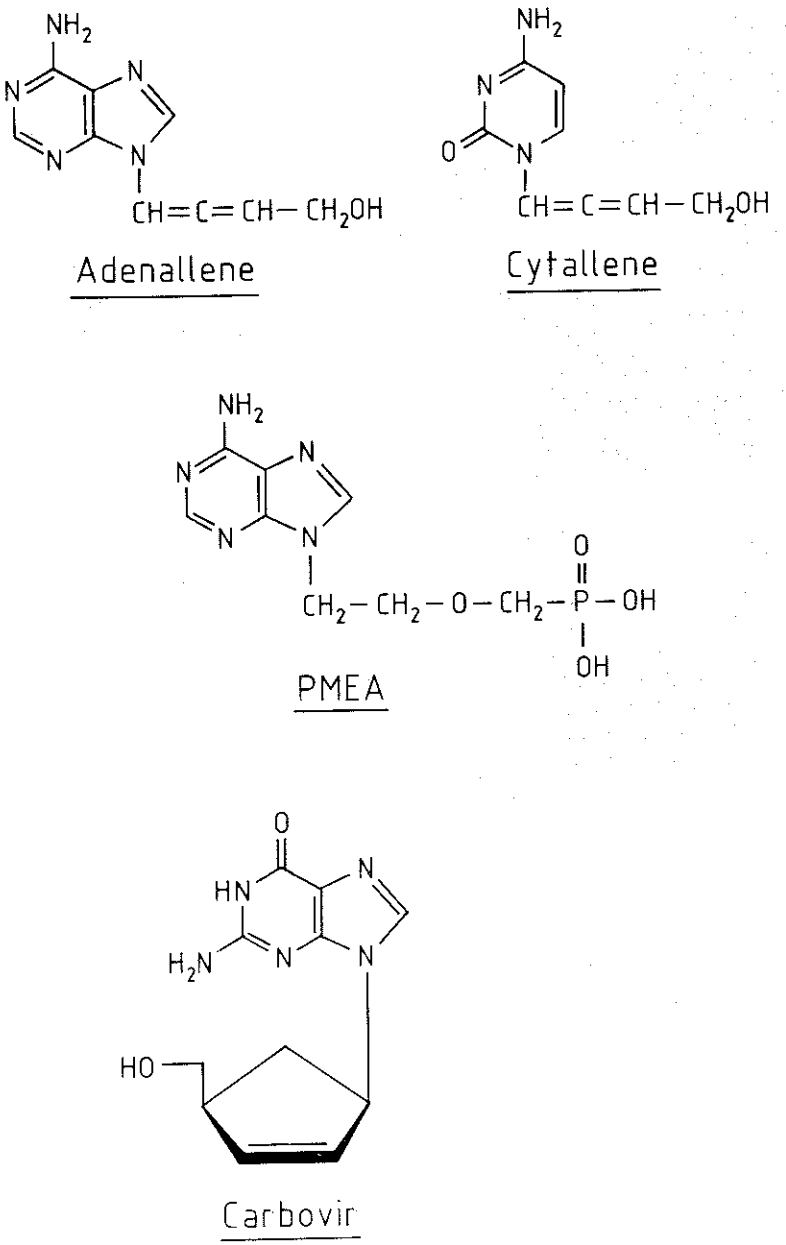


Fig. 6. Acyclic and carbocyclic nucleoside analogues.

replication *in vitro* (79,80). Limiting factors in the use of such oligonucleotides are low cellular uptake and rapid degradation by nucleases. To overcome these problems, the phoshodiester linkages can be replaced by methylphosphonate, phosphorothioate or phosphoramidate groups. The resulting oligomers are then termed oligodeoxynucleoside methylphosphonates (81), oligodeoxynucleoside phoshporothioates (82,83) and oligodeoxynucleoside phosphoramidates (83), respectively. As a target for antisense intervention, the regulatory gene, *rev*, of HIV-1 can be chosen, and an antisense oligonucleoside phosphorothioate against *rev* has been found to suppress viral expression in chronically HIV-1-infected T-cells (84). Sequence specificity and nuclease resistance appeared to be critical for this effect. Antisense molecules thus offer an interesting approach to the chemotherapy of AIDS. It is questionable, however, whether sufficient quantities of these materials could ever be made available to permit efficacy studies *in vivo*.

In addition to glycyrrhizinic acid (51), some other natural products such as the aromatic polycyclic diones hypericin and pseudohypericin (85) and GLQ223, a basic protein (MW: 26000) isolated from Trichosanthes Kirilowii (86), have been described as inhibitors of HIV replication. How these compounds achieve their antiviral action and whether they offer any potential as anti-AIDS drugs is at present unclear. Various other compounds of widely varying structure (i.e. D-penicillamine, amphotericin B methyl ester, peptide T, avarol, avarone, papaverine, somatostatin, fusidic acid, xanthate D609, ansamycin LM 427, etc) have been reported to inhibit HIV replication in some cell systems, but neither has their mode of anti-HIV action been elucidated nor has their anti-HIV activity been confirmed in other laboratories. In fact, initial clinical studies carrid out with some of these compounds (i.e. fusidic acid (87), ansamycin LM 427 (88)) failed to demonstrate any anti-retrovirus activity *in vivo*.

5. Combination therapy

Combination therapy is a widely used procedure in the treatment of bacterial infections and malignancies, as it permits us to obtain higher efficacy and/or lower toxicity than when the drugs are used individually, and, furthermore, it reduces the risk of emergence of drug-resistant microorganisms or cancer cells. Guided by these premises, one may also advocate combination therapy for AIDS. While anti-HIV drugs that interact in a similar fashion with the same target enzyme (i.e. reverse transcriptase) may be expected to show an additive effect when combined, synergism might occur when two drugs are combined that interact at different sites (i.e. reverse transcription and virus adsorption) of the virus replicative cycle. Several combinations of AZT plus other drugs have proved synergistic: for example, AZT with either PMEA (89), PFA (phosphonoformate) (90, 91), castanospermine (92), recombinat soluble CD4 (93), recombinant interferon-αA (94) or granulocyte-macrophage colony-stimulating factor (GM-CSF) (95), and some of these combinations, i.e. AZT plus GM-CSF, have been further explored in the clinic. There is, in fact, a rational basis for combining AZT with GM-CSF, since GM-CSF may be expected

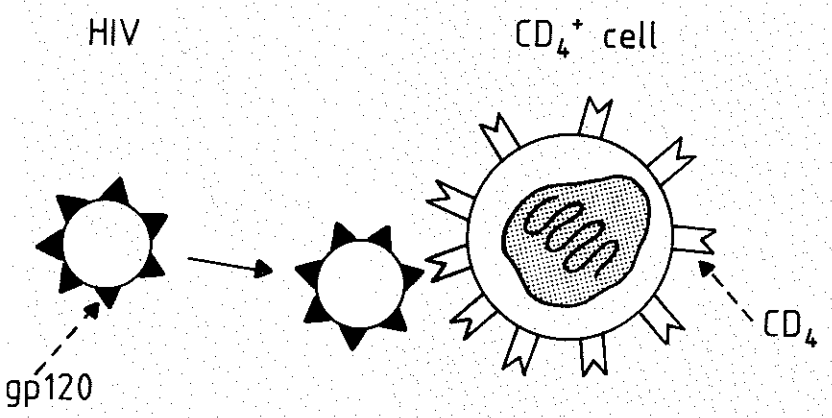


Fig. 7 HIV attachment to the cells

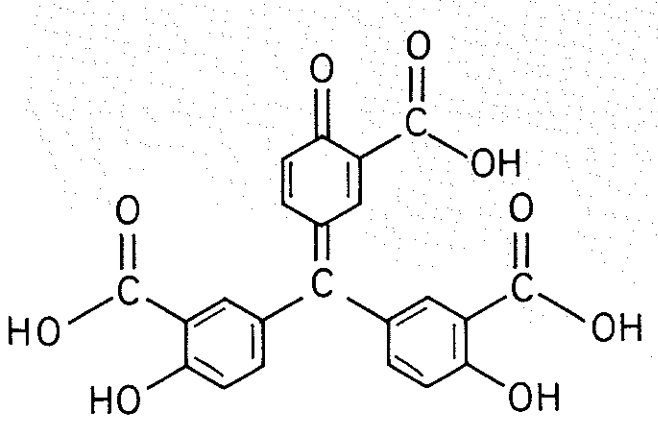


Fig. 8 Aurintricarboxylic acid

to restore the white blood cell counts that are depressed due to the myelotoxicity of AZT, and, moreover, GM-CSF has been shown to potentiate the anti-HIV activity of AZT in macrophages *in vitro* (96).

Not all combinations of AZT act synergistically, however. For example, ribavirin antagonizes the anti-HIV activity of AZT (97,98). Ribavirin also antagonizes the anti-HIV activity of other pyrimidine 2',3'-dideoxyribosides (i.e. ddCyd, d4Cyd, d4Thd (98)), but potentiates the anti-HIV activity of purine 2',3'-dideoxyribosides such as ddAdo, ddGuo and AzddDAPR (98,99). The antagonistic effect of ribavirin on the anti-HIV activity of AZT may be explained by a reduction in the intracellular phosphorylation of AZT (97). Its potentiating effect on the anti-HIV activity of purine 2',3'-dideoxyribosides is probably due to an inhibition of the IMP dehydrogenase reaction (IMP — XMP). The latter leads to a shut-off in the supply of the natural substrates dGTP and dATP with which the purine 2',3'-dideoxyriboside 5'-triphosphates have to compete at the reverse transcriptase level. Thus, an acceptable biochemical explanation can be offered to account for the potentiating effect of ribavirin on the antiretrovirus activity of the purine 2',3'-dideoxyribosides. It would seem justified to further explore combinations of ribavirin with purine 2',3'-dideoxyribo-sides, i.e. ddIno, ddAdo, AzddDAPR, for their therapeutic potential in the treatment of AIDS.

6. Conclusion

AZT was the first, and, at present, still is the only drug that has been formally licensed for the treatment of AIDS patients. This is rather surprising in view of (a) the various deficiencies associated with prolonged AZT treatment (myelotoxicity, progressive fall of $CD4^+$ cell counts, emergence of drug-resistant virus variants) and (b) the abundance of new candidate anti-HIV drugs that have been recently discovered. In fact, these new compounds seem capable of remedying the deficiencies shown by AZT. They are either less toxic for the bone marrow (AzddUrd, d4dThd, FddClUrd), or able to prevent killing of the $CD4^+$ cells (sulfated polymers such as PVAS and PAVAS), or active against AZT-resistant virus mutants (in principle, all compounds mentioned above, except for the 3'-azido-substituted 2',3'-dideoxynucleosides).

The mechanism of action of the sulfated polysaccharides has been well established. The compounds block virus adsorption to the cells, as has been demonstrated with several techniques using radiolabeled virus particles (63,64), a flow cytometric method (52) and a radioimmunoassay (65). The dose-response curve for inhibition of virus replication by dextran sulfate is virtually identical to its dose-response curve for inhibition of virus adsorption (52). Sulfated polysaccharides are also inhibitory to the reverse transcriptse, but it is unlikely that this effect plays an important role in the anti-HIV activity of the compounds, *primo* because this inhibitory effect is noted only at concentrations that are in excess of those required to inhibit virus binding to the cells, and *secundo*, if inhibition of reverse transcriptase were to play a role, it means that the compounds must be taken up by the cells (and able to reach their target enzyme), and this has not been clearly demonstrated.

Sulfated polysaccharides, and in particular heparin, are used in the clinic to prevent blood coagulation, and hence the question arises as to whether their usefulness as anti-HIV agents may be endangered by their anticoagulant properties. This anticoagulant activity should not be too great a concern, since all sulfated polysaccharides, including heparin, are active against HIV at concentrations which are well below the anticoagulant threshold (1 heparin unit) (55) and through the appropriate chemical modifications (i.e. following periodate treatment) heparin derivatives can be generated that have virtually lost their anticoagulant (antithrombin) activity, yet remain fully active against HIV (60). Such sulfated polysaccharides would seem prime candidates for further exploration of their therapeutic potential in the treatment of AIDS.

A rather unique feature of the sulfated polysaccharides (and sulfated polymers in general) is their ability to interfere with giant cell (syncytium) formation, resulting from the fusion between HIV-infected cells and uninfected cells. Like virus attachment to the cells, this fusion process depends on a specific interaction between the viral gp120 (expressed by the HIV-infected cell) and the CD4 receptor of the uninfected cell (Fig. 11). The role of this syncytium formation in the pathogenesis of AIDS has not been unequivocally proven. *In vitro* fusion of persistently HIV-infected (HUT-78) cells with uninfected $CD4^+$ (MOLT-4) cells is accompa-

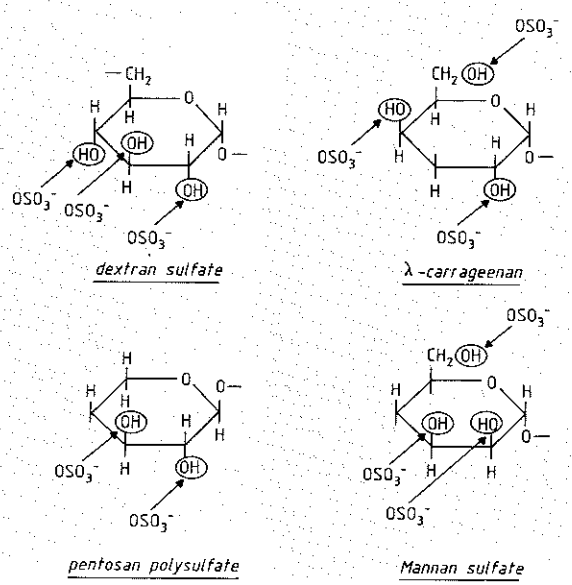


Fig. 9. Sulfated polysaccharides.

nied by a selective destruction of the CD4+ MOLT-4 cells (Fig. 12) (66) If this phenomenon also holds *in vivo*, the selective killing of the target (CD4)+ cells by the aggressor (gp120+) cells may well be an important mechanism that leads to the depletion of CD4+ cells in AIDS patients.

As mentioned above, CD4+ cell counts (after an initial transient rise) progressively decline in AIDS patients while on, and despite of, AZT therapy If this decrease in DC4+ cell counts indeed ensues from the fusion of persistently HIV-infected cells and uninfected cells, and concomitant destruction of the target CD4+ cells by the HIV-infected "killer" cells, any modalities that block this phenomenon may be of great therapeutic value AZT is unable to protect the target CD4+ cells against the HIV-infected "killer" cells, and so are all other 2',3'-dideoxynuc-leosides that are targeted at the reverse transcriptase. In contrast, the sulfated polysaccharides (i.e. pentosan polysulfate) protect the CD4+ cells against destruction by the gp120+ cells (Fig. 12) (67), and this protective activity is probably due to the "shielding off" effect of the sulfated polysaccharides on the gp120 glycoprotein (68). Not all sulfated polysaccharides are equally effective in this regard: for example, pentosan polysulfate and dextran sulfate effectively protect the uninfected CD4+ cells against fusion with the HIV-infected cells, whereas heparin fails to do so (67). As the most potent inhibitors of syncytium formation emerged PVAS and PAVAS (61). These compounds offer unique promise from a therapeutic viewpoint, if, as surmised, syncytium formation, and concomitant destruction of bystander CD4+ cells by persistently HIV-infected cells, plays an important role in the pathogenesis of AIDS.

It would now seem imperative to evaluate these candidate anti-HIV drugs for their effectiveness in the treatment of AIDS patients. These clinical trials should mandatorily be done on a controlled basis, and preferably be done in comparison with AZT. The outcome of such controlled and comparative studies will not be known until the patients have been followed up for a sufficiently long time. This requires (*i*) a strong commitment of the institutions (i.e. pharmaceutical companies) directing these studies, (*ii*) strict compliance of the patients with their treatment regimen, and (*iii*) careful monitoring of the patients for the clinical, immunological and virological parameters of the disease. In view of the wealth of agents that have been found effective as inhibitors of HIV replication *in vitro*, the number of possible combinations that could be envisaged with these compounds is gigantic. Most worthy of further investigation would be those combinations that truly act synergistically in several cell culture systems.

It should be emphasized that all anti-HIV agents and all chemotherapeutic approaches that have so far been described or proposed are aimed at suppressing the virus at one or more steps of its replicative cycle. None of these agents or approaches can be expected to eradicate the virus from its reservoir(s). To achieve this goal, which actually implies the elimination of the proviral DNA from the persistently infected cell, more dramatic measures, i e antisense oligonucleotides covalently linked to a nucleic acid-cleaving reagent, should be envisaged. Only those devices that succeed in eliminating the viral DNA sequences from the host cells may be assumed to accomplish a real "cure" of the disease. In the absence of such devices, current chemotherapeutic efforts should be directed at keeping the virus under control without harm to the host.

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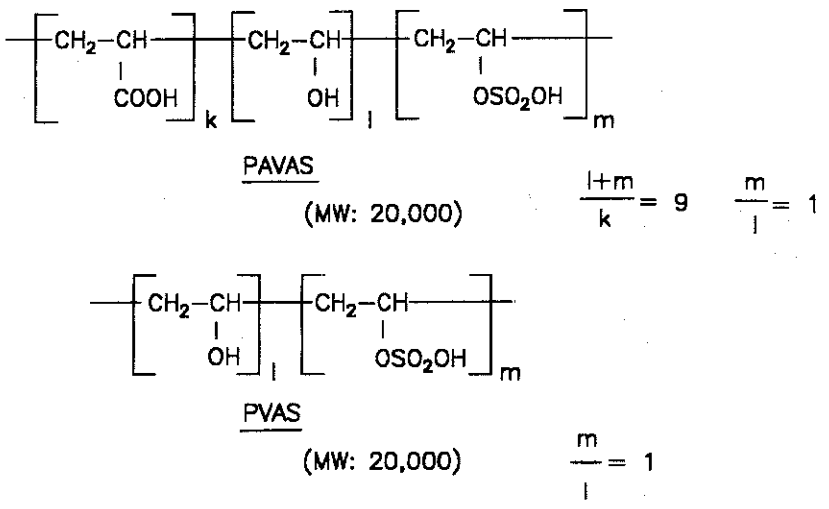


Fig. 10. PVAS and PAVAS

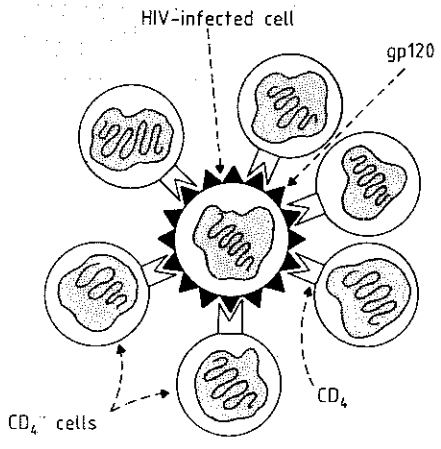


Fig. 11. Giant cell formation.

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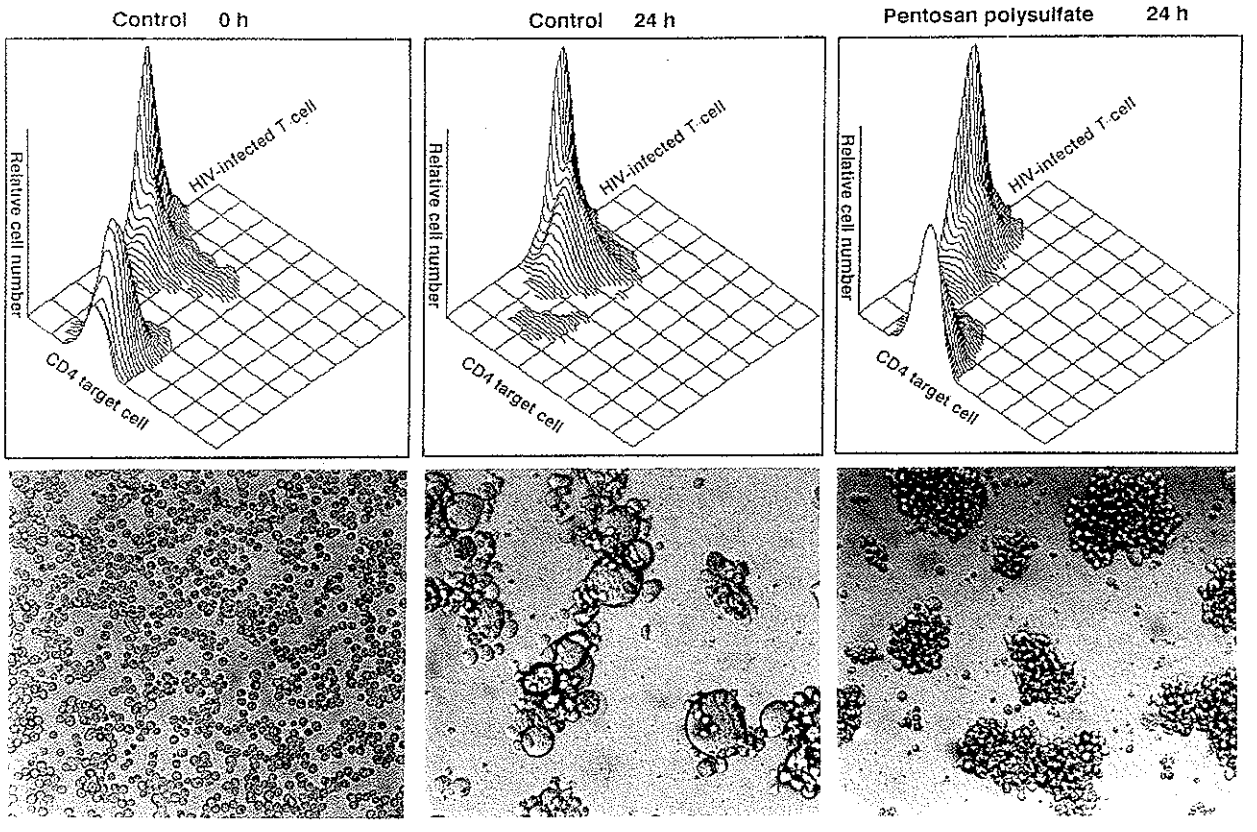
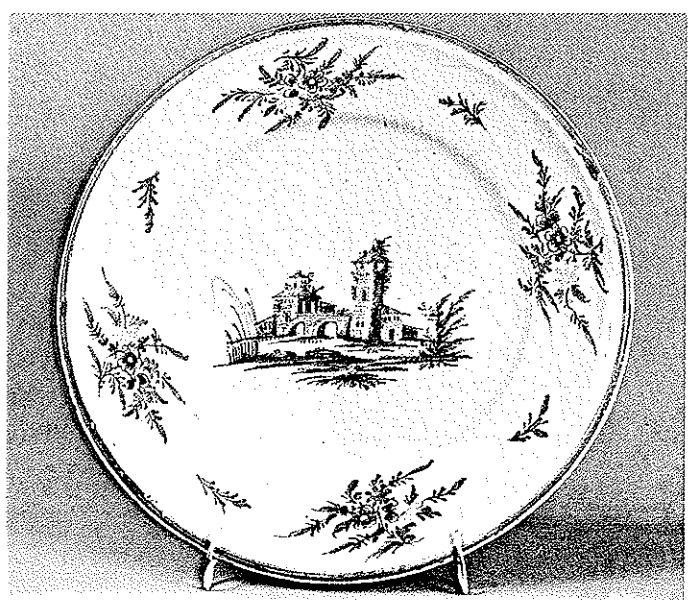


Fig. 12 Giant cell formation is accompanied by a selective killing of the CD4$^+$ target (MOLT-4) cells by the HIV-infected T (HUT-78) cells.

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Clinical Evaluation of Antiviral Drugs for HIV Infection*

PROFESSOR ROBERT YARCHOAN

I would like to speak about some new developments in the therapy of AIDS.

The whole development of rational therapy for AIDS has been made possible by the discovery of a virus that causes this disease, by Doctors Gallo and Montagnier. And that discovery has enabled the cleaning of the blood supply, progress in vaccines, and, in addition, a beginning of the development of therapies.

Since the discovery of HIV, we have learned a lot about its life cycle. This is one of the most complex retroviruses studied to date, and its replication goes through many steps that are possible targets for therapy. The first step is the binding of the virus to the CD4 receptor, which can be blocked by antibodies to the virus, or experimentally produced analogs of CD4. The virus fuses, its genetic material enters the cell and then reverse transcriptase (RT) makes a copy of the viral RNA to DNA. RT is for all intents and purposes a unique viral enzyme and as I will describe, AZT and many of the therapies being investigated now act to block the enzyme activity.

The proviral DNA can integrate into the DNA the host cell and at some later point, when the cell is stimulated, it will produce RNA and viral proteins. These can get broken down and undergo several other modifications, again all possible targets for therapy.

Finally, the virus buds to the cell surface and can form new variants. Each of these steps can potentially be blocked, and again, just to come back to the point, the whole development of rational strategies against this disease has been made possible by the discovery of this virus.

At this point, I would like to focus on a series of drugs that act at the level of reverse transcriptase. These include AZT, DDI, and several other analogs.

In 1984, when it became clear, as a result of the work of Gallo and Montagnier, that HIV was the cause of AIDS, Doctor Macir in our laboratory made a cell line called ATHA which can grow very nicely, but which is very sensitive to the cytopathic or destructive effects of HIV.

In fact, if you add virus to the cell culture the cells are completely destroyed. If you add a drug, such as AZT, the cells grow and will even grow in the presence of virus. And thus we have evidence that a drug blocks the destruction of the cells by the virus and at the same time is not toxic in its own right.

Again, AZT, is just one member of a family of compounds. These differ from the normal DNA building blocks in that they have a change in one small part of the molecule, the three prime position. A replacement of an OH group by an azido group or hydrogen can convert a normal DNA building block into a very potent antiviral compound.

How do these compounds work? Once they enter cells, the cells modify these compounds by adding what are called phosphate groups. These compounds can enter instead of the normal A building block into the DNA molecule and, because of this change, the reverse transcriptase cannot add any more building blocks and the compounds act as chain terminators. The reverse transcriptase prefers these compounds to the normal DNA building blocks, and thus they have a selective anti-viral effect against HIV and other retroviruses.

Soon after the finding in the laboratory that AZT had activity against HIV, our group, in collaboration with Dani Bolognesi's group and the Bullers Wellcome Company, started the clinical trial of AZT. The first patient was treated in July of 1985, at the NIH Clinical Center. This is a patient with AIDS whose CD4 cells had fallen to a very low level, 30 per cubic millimeter. Over the next several weeks, as we gave him this new drug, we found that his CD4 cells arose to over 200. We were quite surprised by this finding, but indeed found that subsequent patients treated with this drug had a similar effect, and on the basis of this improvement in the immune response, we concluded that AZT was having a clinical, beneficial effect. We also noticed that people felt better and in some cases were able to clear chronic infections.

Based on these results, obtained during what we call Phase-1 trial, a large multicenter randomised placebo controlled trial of AZT was started in February of 1986. Over 200 patients were entered. These patients generally had had AIDS with Pneumocystis Carinii-pneumonia. Half received AZT and half received a placebo, and one can debate the effects of doing such a trial. Over the next six months, 20 patients died. 19 were patients who had received placebo; only one was a patient who had received AZT. Based on this very dramatic difference in mortality, it was concluded that AZT was working to prolong life in these patients, and in addition, that it was unethical to continue to give placebo to these patients. The patients who received placebo were at this point offered AZT and also AZT was made available throughout the United States and the world to people with AIDS. The in-

vestigators continued to follow the patients on AZT in this study, found that even in patients with advanced AIDS, AZT can offer over a year's increase in survival. There is also evidence that AZT can be effective if given early in the course of HIV infection.

AZT was widely introduced at the end of 1986 and in the United States, and in 1987 in many other countries. Data from the New York State Health Department, following the survival in months from the date of diagnosis of all patients with AIDS in New York State, show that between 1982 and 1986, there was a very small change in survival, whereas starting with patients diagnosed in 1987 we see a dramatic improvement in survival (at 18 months survival, it went from 40% to over 65%) We believe, although there are some other things that could have been happening, including prophylaxis against Pneumocystis, increased recognition of opportunistic infections and perhaps a delay in reporting, that the improvement in survival of people with AIDS is real and represents a result of the introduction of this drug.

We can look at the question of effective pentamidine by looking at a study conducted in San Francisco in which groups of patients were given different forms of pentamidime. Again, if we look at patients in the study who had received AZT compared to those who, for one reason or another, had refused to take it, received dramatic improvement in survival in those patients who were taking AZT, so this is over and above an effect of prophylaxis against Pneumocystis, which is the most frequent opportunistic infection in AIDS.

One concern that arose was that AZT might not be working in macrophages. The enzymes that I discussed earlier that activate AZT in fact occur only in replicating cells and macrophages generally don't replicate. Dr. Federico Perno, working in our lab, looked at just this problem and found that AZT is very effective in protecting macrophages from HIV infection and it appears that this occurs because macrophages have very low levels of the competing compound, thymidine triphosphate.

Again, macrophages are an important target cell of HIV infection in the brain. We found that AZT penetrates into the CSF, and that HIV-infected patients with dementia had dramatic improvements upon being given AZT. We could study this by measuring the glucose, which is a type of sugar metabolism in the brain of such patients. This can be monitored by positron emission tomography scan, that measures the amount of glucose used in the brain. In a normal individual the brain uses a lot of sugar. A patient who had a very poor memory from HIV infection of the brain before being given AZT had the back part of the brain, the posterior part, without much glucose. As this patient improved, we saw the pattern becoming more normal.

So therefore you can see a progression from the discovery of the ideology of AIDS by Gallo and Montagnier to the discovery of a drug and the ability to improve a dementia caused by a pathogenic retrovirus.



Dr. Piso, National Cancer Institute, found that in some children there is a dramatic improvement in dementia upon giving AZT, and in some children who had an atrophy or a loss of brain tissue before treatment, there appeared to be a reversal of this process upon being given treatment for AIDS with AZT. This is a very encouraging result.

Of course, as many of you are aware, there are problems with the use of AZT. In particular many patients develop bone marrow toxicity. In addittion, some patients given AZT have a severe muscle loss and these patients cannot continue to take this drug. As a result of this, we are all pushing on to develop better and more effective therapies for AIDS. As I described earlier in the talk, AZT is but one member in the family of compounds with activity, and we have recently tested two other members of this family, DDC or dideoxic cytocim and DDI, dideoxic inocine.

Dideoxic inocine is a more complex compound than AZT. It is what is called a purin analog. Dr. Matsuria has demonstrated that in the presence of DDI the cells are protected by the lithic effect from the HIV. Another important thing about DDI is that even in very high concentrations in the test tube, it is not very toxic.

The metabolism of this compound is very complex, as shown here, and it undergoes a number of steps. It eventually forms, however, a compound called dideoxic adenosine tryphosphate, that acts like AZT as a false signal for the virus.

Another interesting feature about DDI is that strains of virus which have become resistent to AZT can still be sensitive to DDI. A problem that we have become aware of in the last year is that certain patients who have been on AZT for a year or so have the virus evolve, so it is much less sentive to AZT. We do not as yet know the clinical implications of this, but we think that it is not good for the patient. Again, a virus from such a patient is still sensitive to DDI.

Based on this finding, we started a clinical trial of DDI with patients with AIDS about a year and a half ago. At low doses we found very little effect, but at intermediate doses of about half a gram to 750 milligrams a day, we found a consistent increase in the number of T4-cells,

which are the major cells depleted in AIDS. In addition, we could measure a fall in the amount of virus in the blood, measured by what we call the P 24 antigen. Again, in a patient receiving high doses of DDI, P.24 becomes undetectable. So, based on these two things, we feel that there is very good evidence that this new drug, DDI, is active in AIDS. We did find certain toxicities in patients receiving DDI, as we would expect of any drug of this class. Most notably, however, we did not see bone marrow toxicity as we do with AZT. We did see high doses of neuropathy or nerve disfunction causing pain in the feet, and, in addition, some patients developed what we call pancreatitis or an inflamation in the pancreas, which can cause abdominal pain and nausea. However, at low doses, we did not see these.

Another interesting feature is that even if neuropathy sometimes develops in patients, by changing the dose or the dosing schedule, we can avoid this complication.

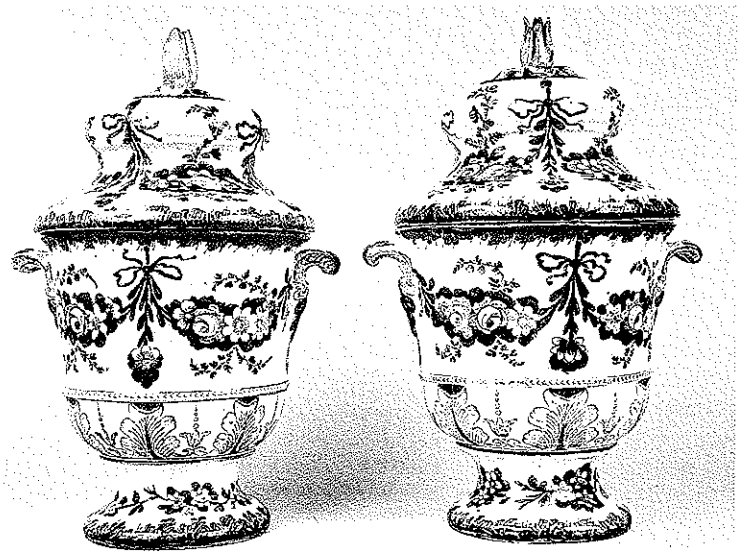
Another drug, DDC, which we previously tested, also caused neuropathy, and patients could not tolerate this drug at high doses for 10 weeks. We found that if we alternated AZT and DDC, we had an increase in the number of T4-cells, a fall in the amount of virus, and the patients could tolerate this regime for two years without developing neuropathy. In conclusion, a small change in the dosing schedule can make a big difference in these drugs.

We are now studying the effect of DDI on patients with dementia and again find an improvement in certain functions of patients who are receiving this drug. A man who was very demented, whose memory was down by 4 standard deviations, with an IQ of about 60 improved almost to normal on taking DDI.

I would like to briefly describe some other approaches. As I mentioned earlier, the first step of a virus attacking a cell is its binding to CD4, and scientists in several laboratories have produced bygenetic engineering in artificial soluble form a CD4 receptor. This can bind to the cell and prevent it from attacking the virus. Such a compound is not science fiction, but in fact is now being entered in clinical trials. A problem with such a compound, however, is that it does not stay in the bloodstream a long time. However, we are now moving to second generation analogs of CD4. One approach, for example, is to link it with hemoglobin. Such a compound will stay in the bloodstream for days and is a practical therapy. Again, this is not science fiction, but is in clinical trials at present. In addition, one can link CD4 with a toxin that may selectively go and kill cells producing the virus. Finally, as Dr. Gallo mentioned in his talk, there are a number of regulatory genes that affect the transcription and translation of this virus. These genes are essential for the virus to replicate itself. By producing what we call an anti-sense, it is possible to block the replication of this virus by having a very targeted piece of DNA or modified DNA bind to the virus and block the replication mechanisms. In our Laboratory, Dr. Matsuria and others have shown that such an anti-sense can block the production of virus even from chronically infected cells, and again we are considering using this in trials in the next year or so. Ideas that were perhaps thought of as being futuristic or science fiction ten years ago are now being considered as real therapies for AIDS. We have already made progress and can increase the survival of patients, both with AIDS or before developing AIDS. We cannot cure this disease or eradicate every last piece of virus from patients. However, we hope to gradually improve the survival of such patients, so that they approach that of someone who is not infected, and in this technical sense we can speak of a cure. As Cardinal O'Connor in his talk yesterday pointed out so eloquently, AIDS has caused suffering almost beyond comprehension. I have personally seen families where both parents and children are either dead or dying of this disease, and never in my experience as a physician have I witnessed such devastation to a young family. We must at present show compassion to those afflicted, and at the same time must all strive together to work towards both prevention and effective therapy for this disease.

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* This lecture was transcribed from a tape recording without having been reviewed by the author.



Treatment Decisions and Ethics in HIV Infection

PROFESSOR EDMUND PELLEGRINO

Introduction

The moral issues associated with the care of human HIV infection encompass the whole panorama of medical ethics. But ultimately all converge at the bedside in treatment decisions for individual patients. Here sociocultural attitudes, theological imperatives, public policies, and professional ethics must converge. This is truly the "moment of ethical truth." How that moment is managed will reveal the moral character of health professionals, of the patients they serve, and the society within which both reside.

This paper concentrates on the ethical issues most relevant to the clinician's decision-making. It begins, therefore, with an examination of the moral obligation to treat, and the way the nature of HIV infection influences treatment decisions. Given the obligation of professionals to treat, the reciprocal obligations of physicians, patients, and society are then examined.

These obligations are generic to all medical transactions. But the fatality of HIV infection and the attitudes of society to its victims generate the necessity for explicit delineation of the guidelines for specific decision.

The obligations I shall describe are applicable to all health professionals. I shall concentrate on the physician, however, because that is the profession with which I am most familiar.

I. The Obligations of Health Professionals

A) The Obligation to Treat

The physician's primary obligation is to treat the sick without discrimination. This duty is firmly grounded in the nature of medical knowledge and the covenant physicians enter into with society when they accept a medical education and take an Oath of commitment to the care of the sick.[1]

Medical knowledge is knowledge ordained to a practical purpose—healing and helping the sick. The sick person needs the physician's knowledge and the skill to apply it correctly. He is dependent on the physician if that knowledge is to be available. Medical knowledge, moreover, is acquired by invasions of the privacy of sick persons—by dissections and autopsies of cadavers, by practice in care of the sick, by human experimentation, and by the perfection of techniques by practice on humans. Society permits these invasions of privacy for one purpose: that the knowledge so acquired will be used for the benefit of others, not primarily the physician's benefit.



Medical knowledge can never be proprietary. It is held in stewardship for the sick. All sick persons have a claim on that knowledge, whether caring for them is a threat to the physician's own health or not.

Moreover, physicians, when they formally enter the profession, take a public oath. This oath is a promise, freely made, that elicits trust. It proclaims the physician's dedication of his/her skills primarily to the care of the sick and not to his/her own benefit. The same promise is implicit every time the physician offers to help and is accepted by the patient as a personal physician.

On this view, there is no moral foundation for the argument that the physician can choose whom he wishes to treat because he fears infection. Self-interest is a legitimate moral concern, but it must be placed into context with the moral claims of others.[2] The nature of healing and medical knowledge entail a degree of effacement of self-interest that precludes discrimination on the basis of the possibility of contagion; this is apart from the fact that the risks of infection are in fact comparatively low.[3]

Surgeons argue that they have a higher risk of exposure than other physicians and should receive special consideration.[4] But this risk is inherent in surgery and surgeons cannot legitimately refuse to heal on this basis. It is unjust to enjoy the prestige and the financial benefits of being a surgeon without also bearing the risks and responsibilities that accompany it.

Exceptions to the firm obligation to treat are of two kinds: 1) when the patient's safety would be compromised, and 2) when the physician's risks ex-

ceed those dictated by his/her responsibilities.

An example of the first kind is the surgeon who, while faithfully trying to fulfill his obligation, finds himself so fearful of infection that his technical proficiency is compromised. It is better to admit this fact and to withdraw than to risk the patient's safety. A reprehensible example is the surgeon whose contempt for homosexuals or drug addicts is so strong that he cannot act in the best interests of these patients, and may even subconciously wish to harm them.

An example of the second kind of exemption is the pregnant physician who might be exposing her fetus to infection should she become seropositive. This would be an injustice to the fetus, which does not share its mother's responsibility to run the risk of exposure. Another legitimate exemption occurs if the physician has an open wound or skin disorder which places him/her at higher risk than ordinary. Similarly, physicians who faithfully meet the obligation to treat may from tine to time become emotionally and physically exhausted. They have a right to some respite from the duty to treat. Their colleagues are obliged to make this possible by sharing the increased work load.

On the other hand, it would be totally unacceptable for a physician to excuse him/herself from treating HIV patients on the grounds that others will do so and therefore patients will not want for care. It is manifestly unjust to shift one's moral obligations to others this way. If all physicians took this position few might be left to care for the sick. The obligation to treat is intrinsic to the physician's covenant with society. It binds all physicians in every field of practice





B) The Obligation of Confidentiality

Since Hippocratic times the physician has been bound to safeguard what he learns about his patient Confidentiality is fundamental to the trust which illness forces the patient to place in the physician. Because HIV infection can seriously jeopardize a patient's everyday relations with family and friends, as well as employment, finances, and ability to interact meaningfully in society, extreme care must be taken to respect the patient's confidentiality. But the duty to respect confidentiality is not absolute. The patient cannot ask that the fact of HIV infection be concealed from his wife or sexual partner. Justice demands that the patient, or if the patient refuses, the physician, should inform those at genuine risk. The patient's moral right to confidentiality is strong, but limited when it can result in serious and definable harm to another person. This is not discrimination against HIV patients. A physician has the same responsibility with respect to other diseases. A convulsive disorder, cardiac arrythmia drug addiction or psychosis in an airline pilot, or railway engineer, for example, which puts other people at serious risk, must be revealed. But when there is no defined danger to others— and this is the usual case—the employer has no right to know

C) Informed Consent

With HIV infection informed consent is a central moral imperative as it is with any other disease. The matter is sometimes complicated by the predilection of HIV infection for invasion of the Central Nervous System. In any serious disease, the physician's obligation is to assess the patient's mental competence as accurately as possible, and repeatedly. Premature diagnosis of mental incompetence must be guarded against as much as too-easy acceptance of compliance with the doctor's wishes. The possibility of mental incompetence must be anticipated and arrangements made well in advance for proxy decision-makers. Lacking this, an advanced directive should be prepared stating the patient's wishes should he/she become incompetent. Reversible disturbances of brain function must be treated to enhance the patient's capacity for decision-making as much as possible. Decisions about cardiopulmonary resuscitation, intubation, mechanical respiratory assistance, heroic or experimental treatments, and food and hydration must be presented to patients or their surrogates. Timing and sensitivity in discussing those decisions are of exquisite importance. When in doubt it is better to err on the side of respect for the patient's autonomy.

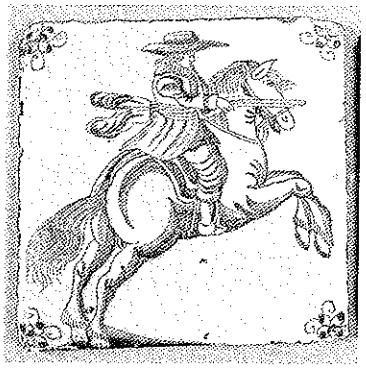
D) Serological Testing

Serological testing of populations or individuals is a debated ethical issue.[5] The testing necessary for accurate diagnosis and treatment of HIV infection is a daily dilemma in the operating and delivery room, the intensive care unit, the dialysis unit, and emergency rooms.

The arguments for involuntary testing are based on the potential benefits of early treatment for the patient, and the potential danger to health professionals and other patients. If blood or tissues are to be donated, testing is morally mandatory. There is, however, no evidence that an HIV infected patient is a danger to other patients in the hospital. Fear of proximity to an HIV infected person does not justify involuntary testing.

The danger to health professionals—those who come into intimate contact with blood, bone chips, or body fluids, those who resuscitate HIV patients or treat trauma—is genuine.[6] A small number of health professionals have become infected by exposure to infected blood in the course of their work.[7] At the writing of this paper, the Center for Disease Control (CDC) has reports of 22 infected health professionals. At the moment this number is not large enough to warrant either involuntary testing or refusing to treat the patient who rejects testing. However, should this number increase, then the argument for involuntary testing would gain strength. What the threshold number should be is highly debatable. But, in principle at least, there exists some risk beyond which the patient's autonomy would have to yield to justice for the health professional.

The question of routine testing has been complicated by recent evidences that early treatment may slow the progress of the disease, save money, or prolong life.[8] Given that, the onset of clinical symptoms may be delayed for many years, patients with HIV infection should be regarded like those with a fatal, but chronic disease which should be kept under surveillance and treated as soon as possible. Some would argue, in light of these, facts that beneficence dictates routine involuntary testing. But these facts do not override the patient's moral right to self-determination, which includes the right to refuse the possibility of treatment. The physician is obliged to advise the patient of the therapeutic possibilities and the value of testing for the patient. But, on balance, the current policy of seeking informed consent for routine clinical testing remains on firm ethical grounds.





Whenever testing is done, the physician has a strong obligation not only to protect confidentiality, but also to provide counselling necessary to help the patient confront the awesome implications of a positive test. The physician must be qualified to do such counselling or must arrange for others to provide it. Some of the most distressing instances of insensitivity have occurred through neglect of the duty to provide counselling. Counselling should include education on the way the disease is acquired, how it is spread, and how its transmission may be prevented; discussion of treatment options and pitfalls; and listing of resources for education, psychological support, and spiritual guidance

E) Experimental Drugs

The fatal nature of HIV infection and the suffering of its victims generate powerful ethical arguments for finding and instituting treatment as soon as possible.[9] In the U.S. a number of alternatives to the randomized clinical trial have been employed to speed up the availability of the more promising drugs.[10] Recently, the National Institutes of Health have proposed a "parallel track" system which would retain randomized clinical trials as the preferred method of evaluation. This would permit drugs judged by an expert panel to be reasonably "safe" to be tested in less formal and less controlled.[11]

Relaxing the requirements for controlled drug testing poses serious ethical dilemmas. The short-term obligation to compassion is in conflict with the long-term obligation to base treatment on valid scientific information. Less rigorous criteria for drug evaluation seem justifiable in patients with clinical AIDS. Here death is the certain end-point. If it is delayed or prevented, then the drug can be judged effective. But in patients who are seropositive without clinical symptoms, the uncertainties of the natural history of the infection vastly complicate attempts at evaluation.

The danger of uncontrolled trials—false expectations, delayed evaluation of effective agents, persistent uncertainty—must be kept in mind even as we respond to the patient's justifiable plea for help. Not to be ignored too are the profit motives that can generate pressure for early use of a drug which may not be at all in the patient's interests.

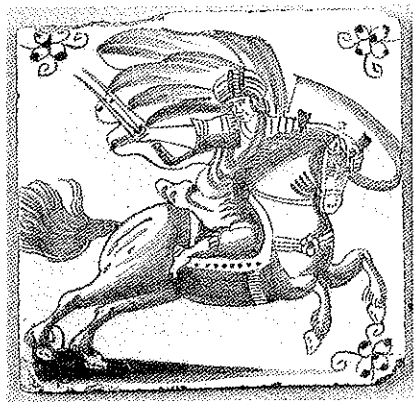
No formula for balancing compassion against good science is at hand. This balance will shift back and forth as new treatment possibilities appear and others fade. If a vaccine becomes available for testing, the issues will be even more complex. Clinicians and policy-makers must work for the indefinite future in a state of exigency in which the ethical imperatives in treatment evaluation are reassessed.

The difficult problems associated with treatment evaluation in HIV infected patients call for continuing critical study of the statistical and epistemological assumptions in randomized clinical trials and their alternatives.

F) Withdrawing and Withholding Treatment

Are the fatality rate, poor quality of life, and economic burdens of HIV infection morally valid criteria in deciding how vigorously to treat, and when to discontinue?

There is no moral justification for criteria other than those applicable to decisions to withhold or withdraw treatment in other diseases.[12] The same criteria of effectiveness, benefit, and burden should be weighed for each treatment.[13] Seropositive patients with no clinical symptoms are, for purposes of clinical decisions, no different from seronegative patients. Those with early clinical symptoms are analogous to patients with a chronic, fatal disease. Those with frank AIDS are analogous to pre-terminal or terminal patients with cancer. Emergency measures that relieve pain or discomfort are indicated for all categories. The more elective procedures, like hemorrhoidectomy, cholecystectomy, non-strangulated hernia, and cosmetic surgery, would not be offered to patients with terminal or pre-terminal diseases, regardless of their nature. Simply put, patients with HIV infection are owed the same range of treatment options pursued as vigorously as they would be in any other patient with similar prognosis.





The economic burdens of AIDS to patients and society are incontestable.[14] But, as I have argued elsewhere, economic considerations are valid only if the decision is made by patients themselves, their morally valid surrogates, or an anticipatory declaration.[15] The physician should not be the gatekeeper or guardian of society's resources. He or she is the advocate of the patient and the final safeguard of the patient's interests. Allocation of society's resources is a public policy decision, not the prerogative or primary obligation of the physician. Society must not put the physician in a position of conflict between the patient's and society's good. The physician should refuse to play such a role.

The same can be said of "quality of life" as a criterion. The suffering of the last days of these patients with AIDS understandably evokes our sympathy. But again, only the patient, or his or her surrogate can decide to withhold or withdraw treatment, including cardiopulmonary resuscitation. The physician is neither morally empowered nor qualified to make decisions about the quality of life of another person. Needless to say, the patient's moral right to autonomy does not extend to assisted suicide. Doctors must never kill, even in the desperate circumstances surrounding the last days of HIV infection.[16]

In sum, the criteria for treatment decisions must not discriminate against patients with HIV infection. They are morally entitled to the same consideration as other patients as judged by the prognosis of their disease and the effectiveness, benefits, and burdens of any contemplated procedure.

G) Collective Responsibility of the Profession

A neglected aspect of medical ethics is the responsibility of the profession for collective action in the interests of the sick. This is not unique to patients with HIV infection.

Physicians, whether they appreciate it or not, constitute a moral community. They are bound together in the service of the sick by the medical knowledge they share, and for which they are stewards, as well as by their Oath, taken at graduation, which is a public promise to serve. Physicians,

as a group and individually, are the final pathway through which all policy decision must ultimately pass to reach the patient. They are inescapable moral accomplices in any policy detrimental to the patient's well-being. As a result, they have the responsibility to advocate optimum care, resist discriminatory policies, and advance research as well as education. Physicians as a group have enormous moral power for good. They are obliged to use it to safeguard and advance the care of all the sick, not the least of whom are those afflicted with HIV infection. But in their zeal for the HIV infected patient physicians must also be sure that the needs of non-HIV patients are respected as well. In addition, there is a collective responsibility to reaffirm the obligation of all doctors to treat HIV infection, to take action against those who do not, and to support physicians who have become infected, whatever the reason. The profession must realize the tremendous influence it can have on public opinion. It should be an advocate for nondiscriminatory, compassionate, and competent care for all HIV infected patients.



II) The Obligations of Patients

It is too often forgotten that ethics deals with mutual responsibilities and duties among humans. I have concentrated on the obligations of physicians since the greater weight of responsibility is theirs. Their knowledge and skill and the vulnerability and dependence of the patient make the relationship an unequal one. But if we assert the obligation of the physician to treat as strongly as I have done, then patients and society incur some obligations to physicians as well.

Patients with HIV should be honest about their history of sexual exposure, drug abuse, or serological status. This information is essential for diagnosis and treatment. Without it the physician cannot fulfill his duties to the patient. Or, it may simply relieve emotional stress among those providing care. Many who care for HIV patients confess to feeling more secure, and more able to treat the patient competently, if they are aware of his serological status. This cannot be dismissed lightly. The emotional stresses are not trivial. They often become so great that doctors and nurses feel compelled to drop out of responsibility for AIDS patients.[17] Finally, while precautions against infection should be taken with all patients, they are more likely to be rigidly observed when serological status is known.



Health professionals who have suffered a needlestick or been spattered with large quantities of blood have a right to ask that the patient whom they have been treating be tested or that his or her serological status be revealed, if known. The patient owes this to the physician in recognition of the physician's fidelity to the obligation to treat. If such a patient's serology is negative, the physician will be spared prolonged anxiety. If it is positive, the physician must know in order to protect his or her sexual partner and to take advantage of early treatment as it becomes available and effective. Likewise, the physician who is seropositive should withdraw from procedures that might expose the patient to infection-surgery, dental procedures, or obstetrics, for example.

It goes without saying that, in these as in all other situations, confidentiality must be rigorously observed. Moreover, if the patient refuses to cooperate, the physician cannot deny treatment for reasons already given.

Society's Responsibilities to Patient and Doctor

The degree of moral commitment a society feels to the sick and especially those with HIV infection will vary with the value it places on care of the sick. Without arguing the case at this point any just society has at least the obligation to make fair and publicly open decisions about allocation and rationing of health services. Discrimination against patients with HIV infection because of the habits associated with this disease is not defensible. The claims of HIV infected patients to care, no matter what the source of the infection, should be evaluated like those of other patients.

As the President's Commission in the U.S. concluded, the most important deterrent to proper treatment of HIV infection is discrimination. Were this removed, the social stigma might remain, but the patient would not be deprived of job, insurance benefits, housing, etc. Also, much of the objection to routine testing would be eliminated, even though confidentia-

lity would not be abandoned. The sooner we can approach HIV infection like any other contagious disease, the better for the patients.

Society, for its part, should impose penalties on physicians who reject their role-related responsibilities to treat patients with HIV infection Suspension or revocation of licensure and privileges, after proper opportunity for defense, does not seem inappropriate for such a fundamental violation of professional ethics. On the other hand, those physicians who fulfill this obligation faithfully should be afforded full protection and compensation, should they acquire HIV infection provided other causes of their infection can be ruled out. Whenever health professionals in the course of fulfilling their responsibilities suffer a needle prick or are spattered with large quantities of blood, they have a right to know the serological status of the patient in question This will entail mandatory testing or disclosure of the serological status of the patient with whom the accident occurred. It would be unjust for society to demand that physicians fulfill their duties unless its own reciprocal obligations to physicians were recognized at the same time. This would include legal protection against losing one's job and provision for working in nonsurgical fields if a physician becomes seropositive.

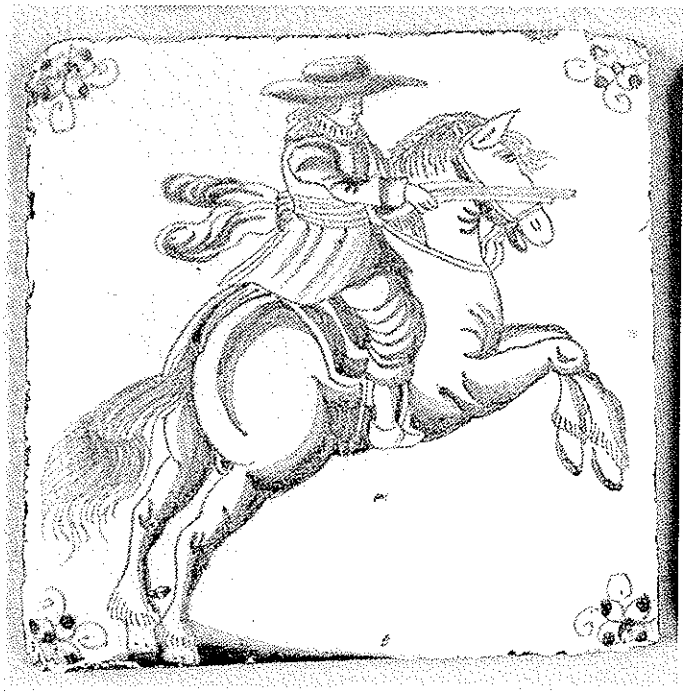
The Health Care Apostolate

I have argued for the mutual obligations of physicians, patients, and society on philosophical grounds. If these arguments are sound, they of course apply to Christians as to all others. But Christians are also bound by charity as their ordering moral principle. Charity requires unselfish solicitude for those who suffer and are ill. Christian physicians should feel special obligations to those with HIV infection. Christian patients should take their obligations to others seriously even if society's attitudes do not change. Christian societies cannot tolerate any form of discrimination. In short, the Christian commitment to charity should make the etical obligations outlined in this essay indispensable in fulfillment of the health care apostolate.

Summary

Caring for patients with HIV infection presents the full panorama of issues constitutive of medical ethics. These come together in the most concrete and urgent way at the bedside in the clinician's daily decision. The ethical foundation for these decisions is the unquestionable obligation of the physician to treat. Once this is established, certain obligations are incumbent on the physician, the patient, and society. Ultimately, most of the ethical issues in the care of HIV infected patients are those which are generic to ethically sound medical care in the first place.

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AIDS: Clinical Aspects

PROFESSOR LUIGI ORTONA

The human immunodeficiency virus (HIV) can cause a wide spectrum of clinical manifestations, ranging from the *acute infection,* to *persistent generalized lymphadenopathy (PGL/LAS)* to *AIDS-related complex (ARC)* and the full blown *AIDS.*

In certain patients the various stages of the infection can present progressively, whereas in others the opportunistic infections and neoplasms of AIDS may be the first clinical manifestation of HIV-infected patients.

The natural history of the infection is also marked by the progressive impairment of cell-mediated immune response as expressed by the reduction of CD4+ cells, and by the progressive increase of circulating p24 antigen, expression of active viral replication.

Neurological manifestations caused by HIV infection are constantly present in the natural history of the disease, with their own evolution, partially independent from the progression of the immunodeficiency.

Patients with AIDS have peculiar clinical characteristics, also when compared to other immunodepressed patients. This needs a specific diagnostic approach in the HIV-infected patient. Certain general signs and symptoms are particularly important to decide the diagnostic procedures.

Fever, generalized lymphadenopathy, diarrhea, perianal pain, dysphagia, shortness of breath, skin and mouth lesions, headache, mental or visual impairment are common signs at the examination of the HIV-infected patient, and they can be differently combined

The diagnostic approach requires the combination of microbiologic, radiographic, and histologic examinations, which frequently must be performed with the aid of invasive procedures such as endoscopy or biopsy.

Opportunistic infections (OI) in AIDS patients involve the central nervous system (CNS), the respiratory tract, and the digestive tract. OI can also manifest as disseminated diseases. HIV-infected patients are susceptible also to community-and hospital-acquired infections prevalent

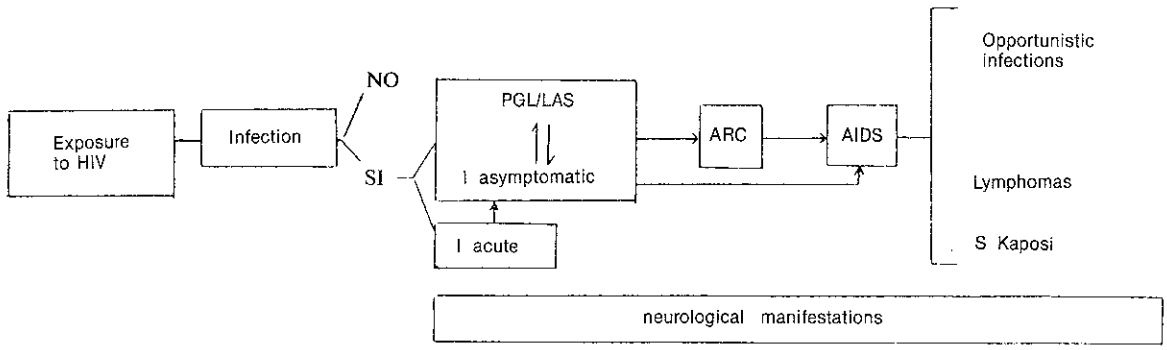


Figure 1 Natural History of HIV Infection.

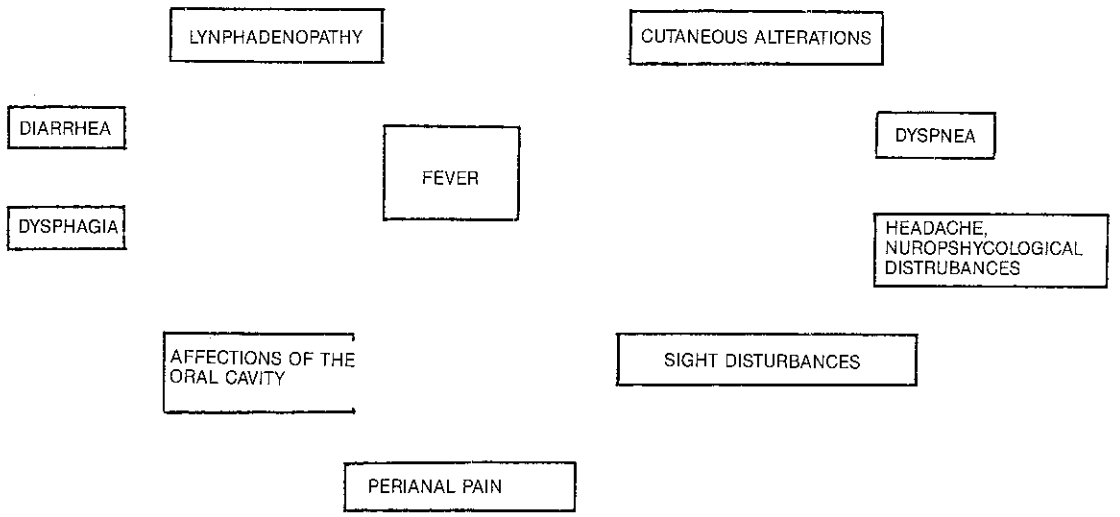


Figure 2 HIV Infection: Symptoms and General Indicators

among HIV-negative individuals. Among these are sexually-transmitted infections and those infections common in the drug addict community

AIDS dementia complex is the most common and peculiar neurological manifestation in HIV-infected patients. In a number of patients ADC is the opening and sometimes only clinical manifestation of AIDS. In such cases AIDS presents as a " neurological disease " with its own evolution, combined with the other manifestations of immunodeficiency.

The signs and symptoms of ADC are characteristic: Cognitive disorders (impaired concentration, memory loss, mental slowing), motor signs (poor balance, leg weakness, difficulty in walking), behavioral disorders (apathy, social withdrawal, modifications of character). These disorders define a pleomorph clinical syndrome.

There is a marked difference between the early phases of the disease, when the signs may be noted only in a careful clinical examination, and later in the evolution, when the clinical picture is dominated by dementia. In the early stages the initial behavioral disorders may be interpreted as a reactive depression In such cases AIDS should be considered borderline between a psychiatric and a neurological disease.

The diagnosis of ADC is based, also in our experience, mainly on clinical grounds, while radiographic, virological and hystologic findings remain complementary. Neuropsychological tests are useful to identify ADC in the early phases of the disease. Neurodiagnostic studies with CT scan or magnetic resonance imaging (MRI) may be helpful in identifying abnormalities of the white matter or cerebral atrophy.

The examination of the cerebrospinal fluid (CSF) may yield a mildly elevated protein and a mild mononuclear pleocytosis, positivity for HIV or its antigens, intratecal production of IgG antibodies, but these findings are not specific. They are merely the expression of the presence of HIV in the central nervous system (CNS).

Cerebral toxoplasmosis usually presents as a subacute syndrome. The patient has fever and malaise for several weeks before the neurological signs and symptoms become evident. Frequently, focal manifestations are combined with nonspecific, diffuse " encephalitic " signs. Focal signs (paresis, aphasia, sensorial disorders) usually relate to hemispheric lesions. Cerebellum and basal ganglia are frequently involved, as can be detected by radioimaging, although clinical signs are less frequent.

Diffuse encephalitic signs, like memory loss, impaired concentration, or lethargy are present in up to 70% of the patients.

The diagnosis of cerebral toxoplasmosis is based on the clinical picture, the serological pattern, radioimaging (CT scan and MRI), and on a therapeutic trial.

The main diagnostic problems that we also encountered are listed. CT scan not always shows characteristic lesions, and contrast enhancement may be absent. MRI, a more sensitive technique, may be helpful in such cases, identifying also multiple lesions when only a single lesion is present at CT scan.

The interpretation of toxoplasma serology is difficult in AIDS patients: IgG antibodies may be present at low titer and IgM antibodies are almost invariably negative.

Brain biopsy was rather frequently performed in the first years of observation of cerebral toxoplasmosis in

AIDS patients, whereas today it is used only in selected patients, when there is no response to specific treatment or a rapidly deteriorating neurological situation.

CNS cryptococcosis manifests as a subacute syndrome with nonlocalizing features. Fever and headache are the most common signs of the disease and they can often remain isolated. Meningeal signs are present in only one third of the patients, and the poverty of clinical signs is peculiar to cryptococcosis in AIDS patients.

Another characteristic of cryptococcosis in AIDS patients is the possibility of dissemination of the infection to skin, lungs, kidneys, bone marrow, adrenal glands.

Mycological findings in the CSF, however, are almost always positive. Other CSF findings are inconstant and nonspecific (mildly elevated protein level with pleocytosis). Cryptococcal antigen is more sensitive than the direct India ink staining, and the positivity of a direct assay has a poor prognostic value. A false negative antigen assay may be caused by the presence of acapsular variants of Cryptococcus neoformans, by the use of nonspecific antibodies or a prozone effect. In spite of these bias, the test is positive in 95-100% of the cases, often at a very high titer.

Intracerebral cryptococcomas occur but are rare. The diagnostic hazards are caused by the frequent negativity of mycological CSF findings. Cryptococcomas must be differentiated from the more common toxoplasma or neoplastic space-occupying lesions.

Pneumocystis carinii pneumonia (PCP) is encountered in about 80% of AIDS patients. In AIDS patients PCP presents often as a subacute illness with 3 or 4 weeks of non-specific symptoms before the diagnosis is established. In one quarter of the patients, the chest radiograph is normal, in spite of the presence of fever and respiratory failure.

When present, the characteristic radiographic picture is a bilateral diffuse interstitial pneumonia. Atypical images include focal patchy images, interstitial-nodular or escavated zones, pneumothorax. Pleural effusion and mediastinal enlargement are usually absent. Recently, extrapulmonary P.carinii infections are being increasingly reported.

The diagnostic approach of PCP has been modified in the past few years towards less invasive procedures.

The sensitivity of bronchoalveolar lavage (BAL) is 97%, similar to that obtained by transbronchial biopsy (TBB), a more invasive procedure, with higher risk of complications.

For these reasons, also in our experience, the first approach is with BAL and, in case of negativity, the endoscopy is repeated with TBB.

The diagnostic sensitivity of induced sputum, a non-invasive, easy to perform procedure, is about 80%, when the specimens are adequately treated. The efficacy of this technique increases if immunofluorescence with monoclonal antibodies is used. Other diagnostic procedures are under investigation, with the objective of defining a specific pattern of PCP when the detection of P.carinii is negative: these include alveolar-arterial oxygen gradient, DLCO, dosage of serum LDH, gallium scans. All these tests, however, remain nonspecific.

The incidence of tuberculosis in HIV-infected patients is increasing. This trend is particularly evident in those geographic areas where drug addicts are the major risk group. In our experience tuberculosis is present in 17% of the patients, and it is the second most frequent pulmonary infection. More recent observations indicate that pulmonary tuberculosis is more common in the early phases of HIV infection, especially when the impairment of the immune system is less severe. On the other hand, extrapulmonary (lymph nodes, blood, bone marrow, intestine, liver, spleen, CNS) and disseminated tuberculosis is more common in the advanced stages of HIV infection.



Chest radiography in pulmonary tuberculosis is variable: in the early phases upper lobe lesions and cavities may be present, whereas later in the disease diffuse pulmonary infiltrates similar to those present in PCP or CMV pneumonia are more common. In the presence of disseminated infection a chest radiograph (as also we observed) may be normal. Pulmonary infiltrates are often associated with mediastinal adenopathy (25% of the cases), which can be a helpful radiologic clue. The diagnosis of pulmonary tuberculosis is not difficult, since the culture of sputum or BAL is almost always positive. Extrapulmonary disease, on the other hand, often requires invasive procedures. The tuberculin skin test is positive in 30-40% of the cases and may be a helpful clue.

Pyogenic bacterial infections have been increasingly reported in patients with AIDS and they presently account for about 10% of pulmonary infections. Drug addiction, poor nutritional status, together with B cell and natural immunity impairment, are be considered risk factors for these infections. In 2/3 of the cases the episodes of pneumonia are caused by community acquired pathogens, mainly Streptococcus pneumoniae and Haemophilus influenzae. Chest radiograph in these patients will often show lobar or multiple infiltrates. In cases caused by H.influenzae diffuse infiltrates may be present, similar to those observed in PCP.

Very often (50-80% of the cases) bacteremia is associated to the pulmonary infection. Hospital acquired pneumonia is most commonly (50%) caused by Pseudomonas aeruginosa; in 2/3 of the cases there is septic shock, 75% of the cases require res-

piratory assistance and the mortality is high.

The *oral cavity* in HIV-infected patients is frequently involved with lesions that may be considered an early sign of progression towards AIDS. Both oral candidiasis and hairy leukoplakia in patients with ARC are considered signs of rapid progression to full blown AIDS.

Oral candidiasis is one of the most common OI in HIV-infected patients. It typically appears as white pseudomembranes on the buccal mucosa, but atrophic forms must also be considered. The diagnosis of the many possible viral, fungal or neoplastic lesions of the oral cavity requires sometimes an invasive or sophisticated diagnostic approach, such as the research of tissue antigens or *in situ* hybridization tests.

Esophageal candidiasis is one of the most common (also in our experience) AIDS-defining diagnoses, being observed in up to one quarter of the patients.

Symptoms, when present, consist of dysphagia and retrosternal pain. The frequent association of oral and esophageal candidiasis permits, especially in patients with AIDS, the diagnosis of esophagitis when oral candidisis and dysphagia are present. The diagnosis is best established with endoscopy to demonstrate the characteristic white plaques. Cytologic and mycologic studies may complete the diagnosis.

A peculiar aspect of Candida infection in HIV-infected patients is the frequency of mucosal recurrences, whereas disseminated disease is uncommon, except in the terminal stages of the disease.

Cryptosporidium is a protozoan parasite that can cause in the immunocompetent host a self-limited enteritic syndrome. Patients with AIDS develop a severe, protracted diarrhea accompanied by abdominal pain, anoreia, malabsorption, weight loss. Diarrhea may be profound, with losses up to 15 liters daily.

Fat and carbohydrate malabsorption is present also in the cases when diarrhea is not too severe. The site of infection is usually the distal small bowel, but any site of the digestive tract, from esophagus to rectum, may be involved. Occasionally Criptosporidium has been reported as the cause of cholecystitis, biliary, pulmonary, laringeal, and disseminated infection.

The diagnosis is based on the research of cryptosporidium in stool or other specimens (bile, duodenal aspirate, sputum), with acid-fast stains (e.g. HMCK), auramine, or fluorescent stains or indirect immunofluorescence with monoclonal antibodies.

For its lower sensitivity, the reasearch of the organism in biopsy specimens is nowadays abandoned except in selected patients (extraintestinal infections).

Cytomegalovirus infection is highly prevalent in the general population and even more so in HIV infected patients: one hundred percent of patients with full-blown AIDS have

Table 1 - *Neurological AIDS Manifestations*

ETIOLOGICAL AGENT	CLINICAL PICTURE
HIV virus	AIDS dementia complex, lymphocytic choriomeningitis, vacuolar myelopathy, peripheral neuropathies, polymyositis, and other neuromuscular diseases.
JC virus	leukoencephalitis
Cytomegalovirus	encephalitis, myelitis, retinitis
Herpes simplex virus (types I and II) Varicella-Zoster virus	encephalitis, vasculitis
Other viruses (Adenovirus type 2, Epstein-Barr virus)	encephalitis
Fungi Crytococcus neoformans	meningoencephalitis
Candida spp.	abscesses
Aspergillus spp.	abscesses, meningitis
Histoplasma capsulatum	encephalitis, abscesses
Coccidioides immitis	abscesses
Protozoans Toxoplasma gondii	abscesses, encephalitis
Bacteria Mycobacterium tuberculosis, Mycobacterium avium-complex, Mycobacterium kansasii	abscesses, meningitis, encephalitis
Listeria monocytogenes	meningitis, abscesses
Nocardia asteroides	abscesses

CMV infection. In over 50% of HIV infected homosexuals CMV can be isolated from urine or semen and it may be intermittently isolated from blood in over 50% of AIDS patients.

In contrast with the relatively low frequency of clinically evident CMV infections, over 90% of AIDS patients have significant pathological findings. This indicates the difficulties in diagnosis and the need to delineate better the effects of CMV on producing disease.

The CMV syndromes that most commonly present in HIV-infected individuals are retinochoroiditis, enteritis, pneumonitis, CNS and adrenal infections, disseminated infection. The prognosis of certain CMV infections has been recently modified by the use of ganciclovir, also confirmed by our experience.

CMV retinochoroiditis is seldom the AIDS-defining process in HIV-infected patients; more frequently it is present late in the course of the disease. Retinochoroiditis may be present in the course of disseminated CMV infection, but more frequently it is an isolated disorder.



The onset may be insidious or rapidly progressive. In some cases symptoms may be absent, and the diagnosis is established only by a routine fundoscopic examination. For this reason we included fundoscopic examination among the routine tests in all our patients.

When present, symptoms consist of blurred vision and decreased field of vision. The infection is usually monolateral, but eventually both eyes may be involved. Fundoscopic findings include yellow-white exudates and perivascular hemorrhage. Retinal biopsy is now considered an unnecessary procedure. There is no spontaneous resolution of the disease, with rapid progression towards blindness in non treated cases.

CMV causes pneumonia in 17% of AIDS patients, but only in 4% as a

Table 2 - *AIDS Dementia Complex. Principal Clinical Aspects*

	SYMPTOMS	%	SIGNS	%
Cognitivi	Amnesia	58.3	Severe dementia	41.6
	Difficulty concentrating	75.0	Moderate	58 3
	Slowdown in thought and speech	83.3	Psychomotor retardation	100
Motor	Altered balance	66 6	Ataxia	75.0
			Tremors	16 6
— Asthenia of the lower limbs		83 3	Signs of pyramidal lesions (ROT, Babinski, etc.)	16.6
			Paresis of the lower limbs	25 0
Behavioral	Apathy, social isolation	83 3	Incontinence	66.6
	Dysphoria	16.6	Signs of damage to the brain trunk	25.0
	Regressive behavior	50.5	Convulsions	25.0
	Organic psychosis	13.0		

single agent; more frequently, it is associated with P.carinii. In spite of the relatively low prevalence of clinically evident CMV pulmonary infection, CMV can be isolated at BAL or TBB in 43% of the patients and in 90% of the patients that come to autopsy. Such discrepancy, also observed in other sites of infection, indicates that the isolation of CMV is not always expression of disease.

The diagnosis of CMV pneumonia is established with a combination of the following findings: CMV culture positivity on BAL or TBB; CMV inclusion bodies on biopsy, CMV antigens, viral genoma with hybridization techniques.

Disseminated Mycobacterium avium-complex (MAC) infection is the most common disseminated bacterial infection in AIDS patients (15-40% of all the patients during their lifetime and over 50% of the patients at autopsy).

Disseminated MAC infection is the AIDS-defining process in only 3-4% of the cases; the disease is more common in the advanced stages of HIV infection, when the immunodeficiency is more severe.

The clinical picture of disseminated MAC infection is nonspecific: fever, weight loss, diarrhea, abdominal pain, generalized lymphadenopathy, liver and spleen enlargement. MAC infection can involve the small bowel, lungs, bone marrow, liver, spleen, adrenal glands, CNS, eyes, prostate, testis, thyroid, thymus, heart.

Whether the isolation of MAC always correlates to the concurrent symptoms is not easily established.

The absence of important pathological alterations, the subacute course of the disease, the difficulty encountered in eradicating the germ from the blood (often present in impressive quantity) indicate that MAC infection is seldom the only cause of death of the patient.

Bacteremia has been reported in patients with AIDS both early and late in the evolution of the disease, independently of the degree of immunodeficiency and frequently related to drug addiction or I.V. catheters.

Bacteremia caused by nontyphoidal Salmonella species are 20 times more frequent in HIV-infected patients than in the general population. The typical recurrencies of the disease are probably related to cell-mediated immunodeficiency (T-cells, macrophages, cytokines). Staph. aureus and Pseudomonas aeruginosa bacteriamas are more commonly related to I.V. drug abuse. Emerging processes are bacteremic infections related to the use of I.V. catheters for therapy or nutrition, caused more commonly by Staph. aureus and P. aeruginosa. The increase of the cases of bacteremia possibly relates to the improvement of overall survival and to the extensive use of nutritional and therapeutic procedures in the advanced stages of the disease.





Individuals with AIDS are at risk for the development of *unusual neoplasms*. These can be considered " - opportunistic " processes, since they arise when the anti-tumoral immune surveillance is impaired. Kaposi's sarcoma and non-Hodgkin lymphomas are the more frequent neoplasms, but also Hodgkin's lymphoma, squamous cell carcinoma of the anus or of the oral cavity, basal cell carcinoma of the skin, carcinoma of the lung, adenocarcinoma of the colon and testicular carcinoma have been reported.

Kaposi's sarcoma (KS) is the most common neoplasm in AIDS patients: the disease occurs in 14-20% of the cases.

In patients with AIDS KS is characterized by multifocal widespread lesions that may involve the skin, oral mucosa, lymph nodes, visceral organs such as the gastrointestinal tract, lung, liver and spleen. In 60% of the cases patients present with disseminated cutaneous and lymph node lesions associated with visceral involvement. Systemic involvement is expressed by the presence of fever, weight loss, weakness.

The lesions of KS are characteristic and the diagnosis can often be established only on clinical grounds. The most common sites of disease are the nose, the scalp, the retroauricular region, the penis.

Lung involvement in KS is particularly severe, also in our experience. Chest radiography in these cases shows a diffuse interstitial and nodular image, sometimes with excavations and frequently with pleural effusion and mediastinal adenopathy. The diagnosis is established with endoscopy and, in selected cases, with lung biopsy. This procedure, however, has a consistent risk of hemorrhage due to the highly vascular nature of the neoplasm. Pulmonary KS has a high case fatality rate when compared

to the cases with extrapulmonary involvement, in which KS is rarely the cause of death.

The most common *malignant lymphomas* in AIDS patients are high-grade B-cell lymphomas. Among these the most frequent pathologic types are the small noncleaved lymphoma (Burkitt or Burkitt-like) and immunoblastic lymphoma. These types account for 60-80% of all the lymphomas in AIDS, whereas they are only 3-8% in the general population.

A common feature in patients with AIDS-related lymphoma is the frequency of the disease at extranodal sites. The sites of extranodal disease are the CNS, the digestive tract, bone marrow, liver, lung, genito-urinary system, heart, adrenal glands, bone, skin. In 18% of the patients there is a primary CNS lymphoma, and in 15% the CNS involvement is within a multisystemic disease. The gastrointestinal tract (26% of the cases) may be involved at any site, from esophagus to anus. Bone marrow infiltration leads to peripheral cytopenia. The prognosis of AIDS-associated non-Hodkin lymphoma is extremely severe, and survival is limited to a few months.

In conclusion, what clinical considerations can be made after 8 years from the first cases of AIDS?

The more recent cases seem to indicate that a modification of the disease, regarding both opportunistic infections and malignancies, is taking place.

The relative decrease of the cases of KS and PCP and the increase of the cases of tuberculosis and other bacterial infections are an example of a complex situation that may be due to a number of causes: epidemiological modifications, the increase of survival, the better definition of therapeutic and prophylactic regimens.

Another important issue is the increase of survival, a fact that cannot be easily explained. Certainly a role was played by the introduction of zidovudine, by the better definition of diagnostic and therapeutic regimens, and by the extensive use of prophylaxis for PCP. This trend casts a ray of hope on an otherwise difficult and dark chapter of today's clinical practice.

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Intensive Therapy for AIDS

PROFESSOR CORRADO MANNI

Because of its epidemiological characteristics and its inevitably fatal prognosis, the acquired immunodeficiency syndrome (AIDS) has by now achieved notoriety in all sections of society with notable implications for the spheres of culture, ethics, law, and health care organization.

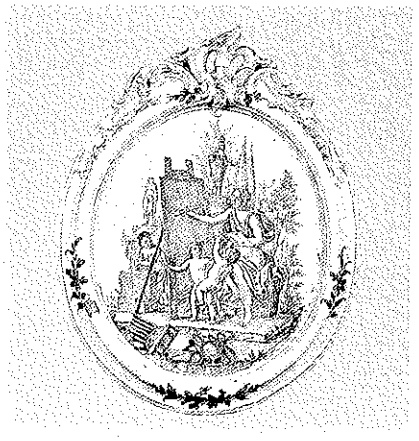
The HIV infection has acquired, in fact, epidemiologically significant dimensions and major observers agree in predicting a further marked growth in the number of patients affected by this pathology.

This explains the psychological impact and the at times exaggerated fear which this syndrome provokes — a fear often made worse by incorrect information.

In the area of the health care difficulties which are involved, and more particularly with regard to questions of resuscitation, one of the most controversial aspects is to be found in identifying starting points and in defining the limits which should be placed on the application of intensive instrumental therapies to patients — like these — who are affected by a pathology which at the present time is incurable and which has an inevitably fatal outcome in a relatively brief space of time.

The treatment of the incurably ill, above all else of those with a small possibility of long-term survival, is certainly one of the most difficult aspects which the doctor engaged in resuscitation has to solve. Within what boundaries is it possible to give exceptional therapies to patients who have no hope of recovery? Up to what point should such a judgement be left to the sole discretion of the doctor? How should the wish of the patient and his possible instructions as to treatment be considered?

If we exclude those who are affected by tumours, subjects affected by AIDS constitute the category of patients with a definitely fatal prognosis which is most represented in the majority of urban hospitals in Western countries. The frequency with which young people are afflicted and the relative newness of the disease obviously increase the size and difficulty of the problem



It is not easy to provide responses to the above questions. But we will make an attempt by analysing our clinical experience and the data that have been published — even though they are still not nearly sufficient to allow final judgements and even less the provision of valid indications for the majority of cases.

It should be stated at the outset that in fact we resuscitation anesthesiologists still know far too little about the development of this pathology, its complications, and the therapeutic possibilities offered by the instrumental techniques which are used in the polyvalent Centres of Intensive Care and the specialised Units of Intensive Care.

At the present moment, we can simply state that with regard to the complications which can appear in the course of the illness, what most frequently indicates an intervention by the intensive care specialist is acute respiratory insufficiency resulting from processes of infection caused by opportunistic germs whose pathogenic levels are increased in the immuno-damaged host.

The rate of pulmonary complications is very high and such complications manifest themselves in over half of the patients (1). These complications can be divided into the infective and non-infective:

Amongst the infective are to be found:

— Pneumocystis carinii pneumonia (PAP)
— Cytomegalovirus pneumonia
— Forms of atypical microbacteria
— the tuberculosis microbacterium

— Cryptococcus neoformans
— Legionella spp.
— Histoplasma Capsulatum
— Herpes simplex
— Toxoplasma gondii

Amongst the non-infective the most frequent are:

— Sarcoma cutaneum telangiectaticum multiplex

— Interstitial Lymphocyturia pneumonia

Indeed, the majority of patients affected by AIDS undergo their first hospitalisation after the appearance of the first infection caused by opportunistic diseases, which in the majority of cases is pneumocystis carinii pneumonia

The mortality rate for this infection is relatively low (around 15%) (1,2,3), but, in a certain percentage of patients, a failure to respond to pharmacological therapy provokes a rapid and dramatic movement towards a very serious form of acute respiratory insufficiency which nearly always has a fatal prognosis.

Although this type of respiratory insufficiency is classically described as a form of Adult Respiratory Distress Syndrome, (ARDS) the mechanism at the base of the respiratory insufficiency is definitely distinctive. The micro-organism attaches itself to the wall of the alveolar and then reproduces in the alveolar space, which gets filled up with a proteic exudate with minimal interstitial involvement.

With the other forms of adult acute respiratory insufficiency (ARDS), on the other hand, there is at first a lesion of the membrane of the alveolar capillaries, with a subsequent edema and spreading of hemorrhage initially at an interstitial level and then at an alveolar level, an interstitial inflammation and formation of the hyaline membrane.

This different initial development of the functional anatomic lesion explains, or at least partly explains, the frequent lack of therapeutic success of the techniques for helping respiratory difficulties which occurs today, techniques which are certainly not very effective if they are begun when the alveolus is already completely occupied by the proteic exudate.

The next physiopathologic evolution of acute respiratory insufficiency in the case of AIDS is, on the other hand, similar to that of the Adult Respiratory Distress Syndrome and is characterised by a marked reduction in pulmonary compliance, and by arterial hypoxemia due to both an increase in pulmonary and physiological shunt and to changes in the ventilation-perfusion ratio.

In the final analysis, respiratory insufficiency in the case of AIDS, and in particular that which follows PCP infection, can be seen as a variety of the universal form of pulmonary response to acute damage.

The indication for an intervention by the intensive care specialist occurs when the patient is no longer able to ensure an adequate aeriform exchange with the simple help of oxygen therapy techniques by facial mask and the application of a respiratory prosthesis is needed.

One of the subjects of the present debate amongst doctors who work in the sphere of critical medicine is precisely that concerning the choice of the most effective technique of respiratory assistance and the most suitable moment to begin it.



Robert M. Wachter (5) of the University of California, in a study carried out in 1988, critically examined the experience of different medical staff in the treatment of patients affected by AIDS, their ability to form a correct estimate of the prognosis of a patient with a respiratory insufficiency because of PCP infection, and their attitude as to when resuscitation treatment was indicated for this category of patients. The study showed that in the Centres where there was a greater degree of experience of the treatment of AIDS patients, the criteria for the indicative moment for artificial respiratory support were becoming constantly narrower.

It is even more interesting to note that to the question: "Would you like to be subjected to artificial ventilation if you were affected by AIDS?" the tendency to restrict the limits for a recourse to intensive instrumental therapy was even more general.

The reasons that lie at the base of this refusal to subject these patients to resuscitation treatment are not to be found so much in the present low level of success in solving this acute problem but rather in the low life expectancy of these patients after they have been discharged from hospital.

On the contrary, no intensive care specialist doubts that there is a need for the intensive care for a young victim of a road accident — even if he has the same hopes of survival — when a state of multiparenchymal insufficiency has been reached and certain complications which require intensive therapy have occurred.

Nevertheless, rational and opposing arguments (at least from a theoretical point of view) can easily be counterposed to whoever maintains that it is appropriate to limit indications for resuscitation treatment both rigidly and in advance.

In the first place, the experience which has so far been acquired is insufficient and often concerns case histories which are not very homogeneous; furthermore, double-blind studies on the effectiveness of collateral pharmacological therapies have not yet been concluded; and finally, an unequivocal criterion by which to define subgroups of patients with different probabilities of survi-

val if subjected to early and aggressive therapeutic interventions has not yet been reached.

In fact, the most up-to-date epidemiological data in scientific publications which deal with the subject lead one to reflect upon the actual possibilities of success for intensive therapy in the case of AIDS.

In a first case study carried out in 1985, there was a mortality rate of 100% amongst the 22 AIDS patients who had been admitted to the Intensive Care Centre of the Memorial Sloan-Kettering Cancer Center and the New York Hospital and had been treated with intubation and mechanical ventilation(9).

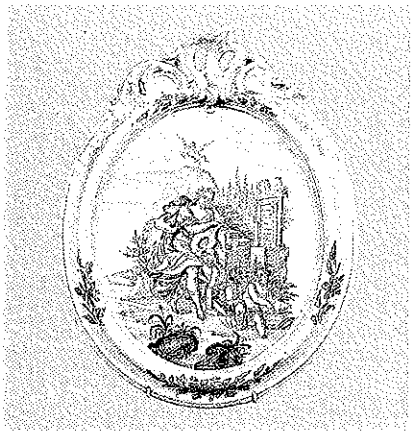
In 1986 Schein and collaborators presented a study on 31 patients affected by AIDS and put into intensive care because of acute respiratory insufficiency; the global mortality rate was 91%.

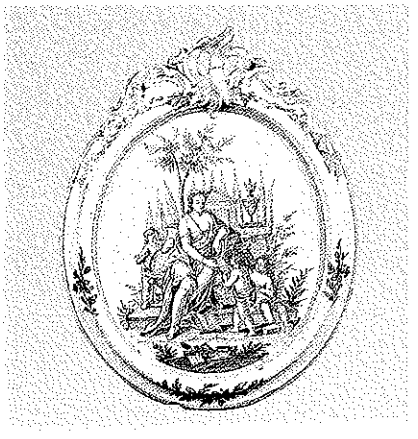
Similar results are reported from the University of Miami (a 91% mortality rate) and the Mt. Sinai Hospital (an 87% mortality rate) (6)

In 1986 (6) a case study on 49 patients admitted to the Intensive Care Unit of the San Francisco General Hospital was also described. 39 of these patients were affected by PCP, and in this group the mortality rate was 87%. In 4 cases other infections caused by opportunistic germs were also present and the mortality rate was 100%.

P.L. Rogers and collaborators (10) present a case history of 216 patients admitted between 1981 and 1987 to the intensive medical care units of the National Institutes of Health, 50 of whom (23%) had been admitted for resuscitation treatment. The majority of these patients (33) were affected by respiratory insufficiency provoked by infections caused by opportunist germs usually involving PCP. 66% of these patients died during their stay in the intensive care section, but mortality within three months after discharge from hospital had already risen to 85%.

A polycentric study carried out in 1988 in 124 intensive care units in the United Kingdom (7) provided the following results: only 12 centres had admitted AIDS patients and the total number of cases was 32. The mortality rate was 72%. The kinds of afflictions from which the patients suffered were extremely varied: PCP in 20 patients, cytomegalovirus pneumonia in 7 patients, ab ingestis pneumonia in one patient, and a different etiology in 4 patients.





An analysis of the data presented shows a certain homogeneity in the results with an extremely high level of mortality in the case of AIDS patients subjected to techniques of respiratory assistance, and an average oscillation rate of between 85 and 100%.

Recently El Sadre of the New York Veterans Administration Hospital has reported more encouraging results from a series of 18 patients during the first episode of PCP pulmonary infection. The patients received mechanical ventilation when the partial oxygen pressure (PaO_2) sank below 50 mmHg, in the presence of a FiO_2 of 0.7. The mortality rate was 68% (11 pz out of 18).

This study is the first attempt to identify valid criteria for giving a prognostic judgement on acute and serious respiratory complications which can occur with this kind of patient.

The following correlated with a favourable prognosis:

— reduced duration of symptoms prior to hospital admission;

— the brief duration of the period of mechanical ventilation which was necessary to overcome the critical stage;

— a rapid increase of PaO_2 after the beginning of the mechanical ventilation;

— an early decrease of levels of lactic dehydrogenase, a specific sign of the gravity of lung damage.

Obviously, these criteria do not allow an identification of patients with a favourable prognosis prior to admission to intensive therapy and at the beginning of mechanical ventilation, They can, however, be sufficient for probabilistic judgements which could justify the beginning of intensive therapy.

The presence of a relatively low level of mortality in this case study can be explained above all else by the fact that all the patients in the study were first afflicted by PCP.

These facts, coupled with the im-

possibility of recognising patients with a favourable prognosis, lead us to argue that they must certainly be subjected to intensive therapy, at an early stage and with mechanical therapies, or at least those who display the first stage of PCP and serious respiratory insufficiency.

We are convinced, however, that improvement in the etiological treatment of the disease and the introduction of new therapies of support during the acute phase will lead to a further reduction in mortalities linked to respiratory complications and will also lead to an improvement in long-term prognosis.

In this way one could change the present unjustified tendency towards an excessive limitation of recourse to intensive therapy in this category of patients.

Our case study regarding the adoption of techniques of respiratory support — such as Continuous Positive Airway Pressure (CPAP) and mechanical ventilation with positive End Expiratory Pressure (PEEP) — deals with 11 patients treated during the period 1 March 1986 to 31 July 1989.

In all 11 cases the reason for treatment was serious hypoxemia which did not respond to oxygen therapy in the form of the facial mask; in 6 cases a PCP infection was present, in 1 case cytomegalovirus pneumonia, and in 4 cases there was both PCP and cytomegalovirus pneumonia.

Only one patient survived and was discharged from the hospital facility. The patient in question, who had both PCP and cytomegalovirus pneumonia, received CPAP treatment with a facial mask (FiO_2 35%, 10 cmH_2O) for 5 days.

The global mortality rate for patients we treated amounted therefore to 91%.

The experience which has been acquired in our Institute, together with published data, allows us to emphasize that intensive therapy for the AIDS patient with acute respiratory insufficiency should be structured according to certain cardinal fundamentals:

— etiological therapy aimed at treating the infective process which is responsible for damaging the lungs;

— symptomatic therapy aimed at correcting alterations in aeriform exchange and chiefly consisting of oxygen therapy with the facial mask, respiratory assistance using Continuous Positive Airway Pressure (CPAP) and mechanical ventilation with Positive End Expiratory Pressure (PEEP);

— nutritional therapy (Total Parenteral a/o Enteral Nutrition) with the aim of correcting the state of malnutrition which is always present in these patients.

Obviously, I will not dwell upon etiological therapy, the specific province of specialists on infection, with whom we work very closely when treating these patients, even when the latter are in intensive care.

With regard to the techniques of respiratory assistance, it becomes continually more obvious that these patients rarely derive benefit from simply oxygen therapy using the facial mask, and it is for this reason that we observe an increased request for intervention on the part of the intensive care doctor to achieve adequate support for the respiratory function.

On the other hand, it is well known that too high concentrations of O_2, especially if administered for prolonged periods, can be toxic for the organism. In fact, when the FiO_2 is superior to 0.5, the nitrogen percentage falls significantly and conditions of a pneumatosis caused by denitrogenization can easily occur. Oxygen, when administered in percentages above 50%, can cause, furthermore, direct lung damage and lower the hypoxemial pulmonary vasoconstriction reflex, causing the condition of hypoxemia to deteriorate.

These toxic mechanisms which, as we had said, manifest themselves when the oxygen level of the air breathed in is above 50%, are preventable using positive pressure in the air ducts during the whole of the respiratory cycle (CPAP).

The simplest method to effect a CPAP is to use the so-called systems of continuous flow.

The type of apparatus we use is made up of:

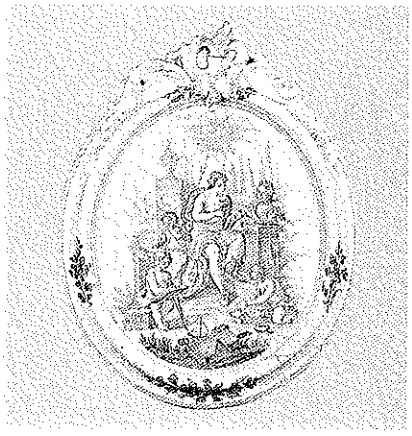
— a gas source consisting of a pair of air-oxygen flowmetres;

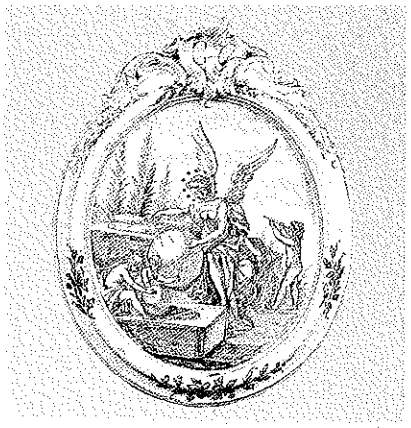
— a humidifier capable of humidifying high flows of inhaled gas;

— a manometre for the monitoring and regulation of pressure in the circuit, which normally varies between 0 and 20 cm/H20;

— a water expiratory valve;

— a stabilization system for the pressure within the circuit consisting of a very elastic 50 lt latex balloon





placed near the patient on the inspiratory line.

This apparatus allows us to maintain a constant positive pressure in the air ducts, with minimal oscillations between the inspiratory and expiratory phases. The use of the elastic reservoir, in fact, makes the oscillations of volume in the system in percentage terms negligible in relation to the volume variations in the various phases of the respiratory cycle. The patient's flow volume, in fact, becomes a negligible part of the volume of air contained in the system.

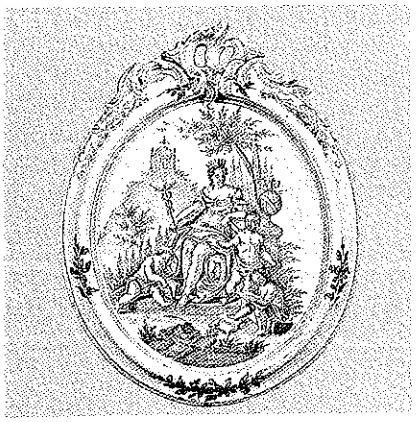
With patients affected by the Adult Respiratory Distress Syndrome, the use of the Continuous Positive Airway Pressure allows us to obtain, in the majority of cases, an increase in the remaining functional capacity, and therefore a reduction of the respiratory shunt and an improvement in oxygenization.

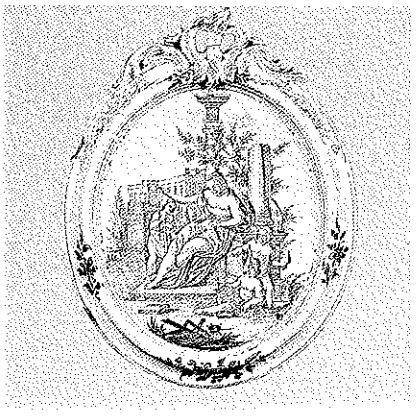
Our hypothesis, also borne out by the experience of other authors (4, 13, 14), is that this technique can favour an improvement in aeriform exchanges, even in the AIDS patient affected by acute respiratory insufficiency; this allows his survival for a period of time which is long enough for the antibiotic therapy to act upon the pathology which is at the base of the alterations of the aeriform changes.

The CPAP, furthermore, presents certain advantages compared to other techniques of aided ventilation, such as: a lower hemadynamic involvement, a lower level of barotrauma complications, and marked simplicity in the method's employment.

The limit to its use is represented by the appearance of muscular fatigue and the consequent impossibility on the part of the patient to maintain an adequate flow volume, with the resultant appearance of hypercapnia and the cataphoric state.

With the advance of pulmonary damage, in fact, the proportion of pulmonary parenchyma excluded by the aeriform ex changes increases, and the recourse to CPAP, with a consequent increase in the average pressure in the air ducts, cannot prevent an alveolar collapse. In these conditions, the combined movement effected by the diaphram and the thoracic cage is unable to reach a sufficiently high level of pressure to expand the areas of the collapsed lungs; the patient begins to hyperventilate without, however obtaining any advantage with regard to aeriform ex change. In these conditions, in rapid fashion, signs of muscular exhaustion appear and the $PaCO_2$ level progressively increases. At this point recourse to mechanical ventilation with PEEP can no longer be delayed.





In our case study it has been necessary to adopt mechanical ventilation with 10 out of the 11 patients treated.

Unfortunately, this was not sufficient to correct the grave accompanying hypoxemia which followed the rapid development of pulmonary lesion caused by the phlogistic process.

Only in 1 case did the adoption of CPAP allow a rapid improvement in the aeriform ex changes: after 24 hours of treatment the PaO_2 increased from its initial level of 54.2 mmHg to 202.6 mmHg. On the fifth day the progressive resolution of the phlogistic process allowed us to suspend CPAP.

Our experience, even if limited, permits the formulation of certain reflections on the criteria for choosing the most suitable techniques of respiratory assistance for these patients:

— Oxygen therapy with a facial mask can be used only when the PaO_2 remains above 60 mmHg in the presence of a FiO_2 of 0.5.

— When, in the presence of a FiO_2 of 0.5, the PaO_2 falls below 60 mmHg, it is immediately necessary to begin respiratory assistance with CPAP. The rapidity with which the instrumental therapy is begun constitutes, in fact, one of the principal factors for a favourable prognosis. We think that a closer collaboration between infection specialists and intensive care specialists is to be recommended and hoped for, and this with the aim of assessing the development of the acute respiratory insufficiency in these patients and identifying, in good time, the most suitable moment to begin the instrumental therapies which would support the respiratory system before it was irreversibly damaged.

— if, notwithstanding CPAP, we observe an increase of the respiratory rate above 25 acts per minute, or $PaCO_2$ levels above 45 mmHg, mechanical ventilation becomes mandatory with PEEP. In these cases, however, the prognosis still remains almost constantly fatal within a short time span.

Finally, I would like to recall an as-

pect of intensive care for the AIDS patient with respiratory insufficiency wich has been little mentioned, but which is important: that of artificial nutrition.

It is well known, in fact, that malnutrition resulting from malasborption by the intestines and a high level of catabolism has a significant role in bringing about immunosuppression in these patients.

The adoption of parenteral nutrition in these ill people could allow a recovery of the anabolic condition and could improve, therefore, the reactive powers of the immunity system.

For these reasons, all the patients treated by us receive a protocol of parenteral nutrition which provides for an infusion of 35 KCal/Kg/a day and 1 5 g/kg/a day of both essential and nonessential aminoacids.

This type of artificial nutrition has enabled us to improve the balance of nitrogen significantly, even if it has not been sufficient to normalize other clinical and laboratory nutritional indices.

However, we prefer not to raise the calorific rate further in order to avoid an excessive increase in the production of CO_2.

In considering positive experiences with other critical pathologies characterized by grave acute respiratory insufficiency, I think a greater degree of attention should be paid to the study of nutritional therapies specifically for this type of patient.

What has been said allows us to offer some reflections on starting points, methods and prospects for the intensive care of AIDS patients.

— even if the prognosis remains very serious, certain critical complicating diseases can benefit from intensive therapy in 10 to 30% of the cases

— intensive therapy is effective above all in the treatment of the first episode of acute respiratory insufficiency caused by PCP, and in particular when the instrumental support of the respiratory functions is begun early.

— with regard to the techniques of respiratory assistance our choice, at the present moment, favours ventilation by Continuous Positive Airway Pressure (CPAP) which, because of its relative simplicity of use, can already be employed in the department of Infectious Diseases.

— the prognosis regarding the acute complicating diseases of the respiratory, cardiocirculatory, and metabolic systems which occur with AIDS presents a tendency (albeit very slow) towards improvement. This must stimulate resuscitation anesthesiologists not to abandon these patients, remembering that even for incurable pathologies there is always the possibility of treatment.

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Introductory Remarks

PROFESSOR FREDERICK C. ROBBINS

Monsignor Angelini, Professor Bettolo, your Eminences, Excellencies, distinguished participants, ladies and gentlemen:

I wish to express my appreciation for the opportunity to participate in this unique conference dealing with one of the most important health issues that we face today. The diversity displayed in the next three presentations is representative of the many challenges posed by HIV infection and the disease AIDS. We will be hearing from a philosopher, a psychiatrist, a basic biologist and I, the moderator, represent medicine and infectious disease.

When I was a medical student, Sir William Osler was often quoted as having said that if you understood syphilis you knew most of what one needed to know in medicine. The infection presented in many different forms and involved most of the organs of the body. Furthermore, it presented important social and public health issues. Although syphilis still occurs, it is no longer the problem it once was since penicillin became available.

In some respects AIDS is the modern day syphilis. Although HIV directly involves primarily cells of the immune system and the brain, secondary or opportunistic infections may involve any organ in the body.

AIDS shares attributes with many other infections. But the complex of an infection that is transmitted principally by blood or blood products or venereally is due to an agent that integrates into the genetic apparatus of the cell, has a long incubation period, is highly fatal, is associated with certain behavior patterns such as sexual promiscuity, homosexuality, or drug abuse that are considered by many to be socially deviant, has a variety of clinical manifestations, has no effective treatment, has no means of prevention other than altered behavior, stresses the capabilities of all aspects of society: scientific, medical, social, political and even economic.

The sudden appearance of AIDS, seemingly out of the blue, and the rapid spread in certain populations has given it a mysterious and frightening aura and a semblance of uniqueness.

As has been pointed out already, in contrast to the situation with other pandemics, such as plague or influenza, modern science has made it possible with remarkable speed to elucidate the cause of the disease, to dissect in great detail the biochemical and immunological features of the virus. Indeed, we probably know as much or more about HIV in comparison to any other infectious agent. We also know a great deal about its me-







ans of transmission, and the mechanism by which it causes disease. This information has been of great help in alleviating some of the mystery surrounding the disease and reducing hysteria. It also gives us hope that we will be able eventually to develop effective treatment and prophylactic measures such as vaccines, although no one can predict when. In the meantime we must rely on ameliorative treatment and for prevention, modification of behavior that are notoriously difficult to influence. One thing that we can be very sure of is that throughout the world there are many thousands of people who are already infected and, barring some discovery soon, they will be developing AIDS and will have to be cared for one way or another.

AIDS, like some other major global issues, such as malaria, malnutrition, environmental deterioration and the threat of nuclear war, calls upon the skills of all aspects of our world society, including scientific (physical, biological and social), spiritual, economic and political as well as all facets of preventive and curative medicine. The makeup of this conference demonstrates most clearly both the need for the involvement of many different elements of society and the global features of AIDS.

The fact that the Catholic Church is giving this infection such major attention is of great importance to the world. There may be differences of opinion about the suitability and usefulness of preventive measures, such as the use of condoms or providing drug addicts with clean needles and syringes; there is clearly no difference of opinion whatsoever about the importance of rapidly elucidating further the basic features of the disease, developing effective treatments and preventive measures such as vaccines, as well as providing compassionate, humane care to those suffering from the disease and their loved ones.

Again, I would like to congratulate Monsignor Angelini, Professor Bettolo, and others involved in the development of this conference for providing a forum for the many different disciplines represented and for the various points of view that are being expressed.

Professor FREDERICK C. ROBBINS
Nobel Prize Winner in Medicine,
President of the National Academy
of Medicine, USA

Prevention: the Human Person and Responsibility

PROFESSOR SERGIO COTTA

1. Scientists and humanists: Necessary cooperation

AIDS is a disease which raises a number of very complicated questions because of its very particular nature. In fact, both scientific and medical-health questions and social questions of a cultural and moral nature accumulate and overlap within it. A complete knowledge of this disease — of its causes and effects, and of the chances of forming a successful front against it — calls for co-operation among experts from the different scientific and humanistic disciplines. This cooperation is not easy because of the widespread and firmly held belief that there is an epistemological and methodological separation between the sciences of nature and the sciences of the spirit and of culture.

Here it may be observed that every *serious* humanistic theory has the same method as science, because it bases its observations on knowledge of human reality: from Socrates until modern times. But, leaving this aside, the division of these two kinds of science must be overcome as regards to AIDS. This must be done without provoking or justifying undue invasions into the province of one another's competence, but also without being afraid of comparisons between respective analyses. The need to reach a comprehensive interpretation of the disease requires an overcoming of every particularism.

For this reason, the scientist and the medical doctor, whose attention is focused on the disease and its treatment, must not neglect the man-human being who is psychologically and culturally involved in the treatment. The humanist (if we can so call him) must recognise, for his part, that the first reference point for his considerations is the hitherto verified scientific data regarding the disease. To put it simply: the humanist cannot think that he can make a contribution to AIDS research by meditating on the general human condition or on the specific future or present condition of the patient. He must first of all realise what this disease is in scientific terms. In this area, notwithstanding a number of scientific uncertainities regarding AIDS (the beginning of its 'natural history', the virus's multiplicity of strains, or the chances of a vaccine), a fact of the highest importance to the humanist — and not only to him — has by now emerged with certainty. AIDS is an infective and contagious disease which so far is *incurable*. Its different forms of transmission (through blood, sperm etc.) are the result of *particular forms of personal behaviour*. Indeed, AIDS is described by everybody as a 'behavioural' disease.

From this simple fact certain important consequences follow both for the scientist and the doctor, and for the humanist. The present incurable nature of the disease makes its condition terminal, an outcome which can be delayed but not avoided. This renders an attempt at general and specific prevention indispensable, and such an attempt must be effected in addition to treatments aimed at defending and supporting the patient against the collateral effects of the disease. This is a complicated endeavour which is not only based on medical-health information, but also upon cultural education because of the psychosomatic nature of the human being. Informational-educational prevention implies a precise knowledge of the forms of behaviour which cause the disease and of their relationship to normal human life, that is to say, a life which is not harmful to oneself and to other people. This is the key difficulty, and the humanist, or to be more exact, the scholars of the different human sciences, have much to say on the subject. This paper belongs to this field and, more particularly, to its ethical-legal aspect. The author, in giving it, will seek to highlight certain essential points which contribute to an overall consideration of the question.

2. Order and disorder

The attention of the humanist must be directed, in the first instance, to the scientifically proven fact that AIDS is a *behaviourally contagious* disease. This definition in itself has the effect of determining the field of the humanist's considerations. The behavioural aspect shows that the transmission of the virus is not due to casual, sporadic, or unconscious acts, as happens in the case of other contagious diseases. On the contrary, it is a result of a homogeneous sequence of coherent acts which constitute the particular and habitual 'behaviour' of a person. This behaviour is the outcome of a certain mode or style of life, of which the person is aware because he has adopted it and recognises himself in it. And because man is not an entity that is only subjected to naturalistic determinism, his behaviour is of a cultural character.

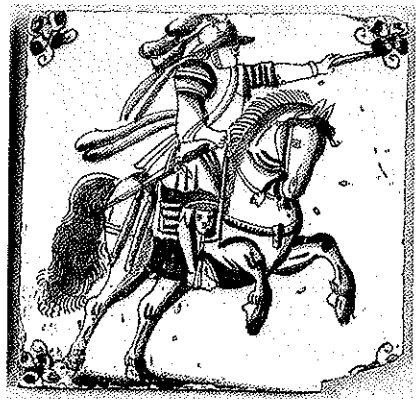
On the other hand, the indubitable contagiousness of the disease, which derives from the personal behaviour or lifestyles in question, shows that these forms of behaviour take place

in the context of *interpersonal relationships*. Put simply, these are forms of behaviour which do not concern only the person who adopts them and puts them into practice. They also concern people who are involved because of the possibility of acquiring the disease either in direct fashion, through a conscious participation in behaviour which is known to be contagious, or in indirect and often unconscious fashion through recurrence: one is thinking here of perinatal transmission.

Today's public is well informed as to the behaviourally transmitted contagiousness and fatal effects of this disease. Because of this an objective question of responsibility arises which primarily concerns those who adopt these forms of behaviour, but which also concerns those who agree to take part in them, even if in an irregular or limited way, because these latter, through recurrence, become potential spreaders of the disease. The general activity of information directed at prevention requires, therefore, being completed by an equally general endeavour to make people responsible. This must clearly be of a cultural nature and calls for cooperation between scientists and humanists.

If the humanist wants to perform his task well, he once again needs to refer to the scientific data which have identified the so-called *personal* 'forms of behaviour at risk' which carry the possibility of infection. As is well known, those which have been identified are: drug-addiction, homosexuality, bisexuality, and promiscuous sexuality. All these forms of behaviour, when they do not derive from organic anomalies, are the products of personal choices, however much these choices may be influenced. As I have already said, such forms of behaviour shape lifestyles all of which concern the interpersonal sphere, but which, as we will see later, have their own separate characteristics. From this point of view, these forms of behaviour are *objectively disordering*, in so much as they disturb — because of the risk they carry — that interpersonal relationship rightly termed *objectively ordered*, and so defined because it does not injure one's own personal integrity or that of another person, but respects it. In the objectively ordered relationship, people find themselves in a symmetrical position of parity which comes instead to be disordered by the risk induced in others.

However, it is exactly the reference to order and disorder which raises a great theoretical question. In fact, while the biologist and the doctor have a clear idea, at the level of principle, of the distinction between the physiological and the pathological, notwithstanding the fact that these overlap in personal experience, humanists themselves are divided. According to certain influential and widespread orientations of contemporary thought, there is no *natural* (in a cultural and moral but not a biological sense) order in the being and existence of man. It would be impossible to determine a life according to order because it is in man's nature to be a free being who moulds his own existence by following freedom of choice. Obviously, the idea and the presence of order are not completely denied, but order is seen as an ever temporary reality whose contents are always in doubt. For this reason, it could not be used as a permanent reference point for existence, capable of providing objective criteria which would distinguish good ways of living from bad ways of living.



In this thought-frame the scientific distinction between the physiological and the pathological does not exist. On the contrary, the idea that it can have an analagous form in the humanistic sphere is denied, precisely because this distinction is of a biological and naturalistic nature and therefore not pertinent to the particular modalities of human existence. Such an existence is characterized by the independence of the cultural and moral choices of life of each individual person or the social groups to which people belong, whose conflict is the beneficial source of progress, which becomes continually more dialectic. The incommunicability between the bionaturalistic order and the dialectical way of life of man is the most clamorous consequence of the dissociation between the sciences of nature and the sciences of the spirit or of culture.

One can note that this dissociation reveals a serious internal contradiction in modern empiricist thought: on one hand, it shows itself characterized by scientific spirit and method, but, on the other, even though it accepts the technical-operative valence of science, it rejects the cognitive valence of the particular spiritual, corporeal, and unitary nature of man. The dissociation between the two sciences corresponds to a dissociated idea of man, who appears interiorly divided: on the one hand, he is subject to the determinism of his corporeal aspect; on the other, he is free in his spiritual and cultural life choices. The outcome has a negative effect with regard to understanding the whole man; therefore, I do not hesitate to say it is fatal to the orientations of his life.

It is impossible to discuss such a line of thought in a critical and profound fashion at this juncture. Such a line of thought, although not the only one of our day, is widely diffused, even at the level of the mass-media. Here it suffices to say that if human existence is characterized, at an empirical level, by a dialectical movement of cultural progress (and regress), the corporeal-spiritual structure of man's *being* is in itself immutable and intangible, or there is a risk of its diminution or even its disappearance.

One can leave this typically philosophical discussion to one side. However, scientists should not be indifferent or passive towards it — aware as they are of the important contribution in terms of truth that their science gives to a complete knowledge of man. Yet one must bear in mind, at least when talking about AIDS, that the attribution of these behavioural life-styles to certain *personal* and *independent* moral or cultural choices which lead to the diffusion of the disease has grave consequences for the above-mentioned question of responsibility. This clearly emerges when one recognizes the existence of an objective order in interpersonal relationships, but it becomes difficult when such relationships are made to depend upon subjective choices.

The autonomy of the subjective choices of life achieves its radical expression in a very precise variant in modern thought, which goes from Sade to the 'sexual revolution' — in the anarchical sense — of Wilhelm Reich, Breton, Foucault, Deleuze, and others. According to this line of thought, each impulse and desire is legitimate and must be 'freed' from any and every bond, the latter being considered a coercive taboo. However, although this line is no longer marginal, the most widespread subjectivist orientation is very much less radical. The incontrovertible damage which is caused by the forms of behaviours at risk *via* the contagion is not denied, but negative judgement does not fall on them, or rather the *cause*, but only on their social *effects*. For this reason, it is recognised that these effects *must* be avoided with opportune and necessary preventive measures; it comes to be admitted, even if usually in an indefinite way, that the nonuse of these preventive measures can lead to the responsibility becoming personal. But the cause (the form of behaviour) is removed from the value-judgement because it is said to have its own source in the autonomy of choices; only one boundary is applied to them: they must not damage other people. But this boundary is very indefinite. What, in fact, is the damage which must be considered? Certainly the physical damage, but also economic damage, because of the diminution or the loss of ability to work. And psychological- existential damage, such as anxiety caused by the possibility of experiencing the contagion or disturbance caused to affective relationships. Apart from this, the cause-effect nexus, which is so important in the scientific field, is considered negligible, without serious consequences, by a certain kind of thought which, moreover, declares itself to be 'humanistic'.

The tendency to give negative judgements on the effects but not on the forms of behaviour at risk themselves, is the result, apart from the already mentioned general principle of the autonomy of life choices, of two other specific forms of argument. The first one has its origins in the fact that these forms of behaviour have their roots in deep layers of the personality, the psyche, and sexuality, to which they biologically belong, but which are lived with a sensibility and modality which are completely personal. That is why they are considered intangible by many people. It is said that if they are not considered in this way, there is the risk of an attempt



on the person, and when they are disapproved, they must be tolerated, but on condition that suitable preventive measures be taken. The second argument is less dignified, but is more easily and more widely accepted. The ascertained forms of behaviour are certainly 'a risk', but this does not mean that they always involve the transmission of the virus: in this case, too, it is only necessary to take proper preventive measures to avoid its acquistion. The two forms of argument share the following reasoning: the forms of behaviour at risk are not a *malum in themselves* and, therefore, are not to be reproved; it is just that they can cause a possible illness, against which one need only adopt suitable preventive measures - for whose use alone is one, if the case should arise, socially responsible

3. The question of responsibility

Hitherto the only remedy which has had a certain effectiveness against the epidemic diffusion of AIDS is prevention. This obliges us to consider the question of responsibility in a more profound way. In fact, the hypothesis of success in prevention which is based only on general notional information is not realistic when one is dealing with a behavioural disease. Such information leaves out an attempt at developing personal responsibility.

As I mentioned before, in the present cultural climate the supporters of an objective order (or rather objectively verifiable) in interpersonal relationships are opposed by its deniers in the name of the autonomy of choices. Nevertheless, a lowest common denominator connects these positions, and it is the admission that there is a responsibility towards effects. But afterwards these positions diverge profoundly. Consideration, therefore, of the question of responsibility must begin with the acceptance, even if purely provisional, of this simple common fact.

Generally speaking, it is important to point out that an authentic definition of responsibilities — or rather one which is not occasional or instrumental in a merely utilitarian way — cannot come *only* from fear or social reproval or a legal penalty. This is not to deny the effectiveness of such threats or their *raison d'être*. This is

because social reproval and legal penalties, when united or separated, find their origins precisely in the observed negative effects of the forms of behaviour in question. As I will now try to make clear, this is not sufficient to make the person authentically responsible for his own actions.

Authentic responsibility is a process which involves the satisfaction of two fundamental conditions, one is of a cognitive kind and the other is of a moral kind. It should be observed in passing that the fulfillment of these conditions is also a solid objective justification for the legal prohibition and penalization of acts and forms of behaviour which are not approved.

The first condition, which has a priority at the level of procedural logic, is the awareness that 'no man is an island': this is a saying of the English poet John Donne made famous by Hemingway's novel *For Whom the Bell Tolls*. It means that the existence of the individual really occurs only in the context of forms of *coexistence* with other individuals. The second condition which must be fulfilled has its origins in the first. In fact this co-existent situation is inevitable and necessary for the individual's life, and the awareness which is obtained of it would not have any meaning if it remained a theoretical, abstract idea which did not have any practical reflection in human life. Awareness, therefore, of human coexistence requires an acquisition of the meaning of solidarity amongst those who co-exist. In synthesis: the individual must recognise that he is *responsible* towards others, so that he is (or comes to be) made aware of the solidarity which the coexistential condition of his life requires.

These general reasons explain why, as I have already observed, an *education* of personal responsibility is necessary in the case of AIDS. To conclude this point, prevention finds the indispensable premise to its planning and its effectiveness in the indissoluble binomial made up of scientific *information* and *education* in solidarity

After clarifying the question of responsibility in its general terms, we can pass on to an analysis of its applications in the case of AIDS. Here it is important to bear in mind the two stages of rapid development of knowledge about its field of diffusion.

First of all, the disease appeared limited, at the level of *personal behaviour*, to the so-called 'groups at risk': drug- addicts and homosexuals. Indeed, it appeared within, and at first the diagnosis of its transmission was confined to, these very groups. The above-mentioned 'groups' are aggregates of a social-cultural nature because the period when the use of drugs and the practice of homosexuality were sporadic and clandestine is over. Simplifying a great deal, one can say that in the case of homosexuals a culture of desire for pleasure and personal gratification which exceeds the genetic-biological facts of masculinity and femininity is dominant. A culture of the mental world dominates the drug-addicts. It favours the dimension of sensibility with the special aim of escaping from the factual conditions of life, and sometimes even with the intention of going beyond them and experiencing a completely unknown newness.

With regard to these 'groups at risk', the task of informational-



responsibility-oriented prevention has two aspects For those who do not belong to such groups it expresses the necessity of taking appropriate precautions when they have sexual relations with potential transmitters of the contagion. For those who are members of this group, it avails itself of that particular kind of social solidarity which is 'group solidarity', and which is produced by a bond of commun culture Sociologists and anthropologists define them, with more precision, *as sub-cultures*, because they are not completely extraneous to the general culture, even if sometimes, with regard to certain particular aspects, they often oppose it polemically

This kind of solidarity is (or can be) stronger amongst homosexuals than among drug-addicts. In fact the first constitute a group which is based on specific and closer interpersonal relationships. The drug-addict group is, as is commonly said, a 'wide net'. In both cases, however, group solidarity can give rise to a sense of responsibility towards fellow members of the group, and can therefore induce a use of appropriate preventive measures so as to avoid the possible diffusion of the pathological contagion. It is a form of solidarity, however, which aims at avoiding the dangerous effects but not at abandoning the lifestyle, which, on the contrary, becomes reinforced because prevention of the harmful effects makes people think that it is no longer dangerous.

But even if responsible prevention, which is particularly difficult in the case of drug-addicts, were to be achieved within these groups, it would no longer be sufficient. In actual fact, the stage of the diffusion of the disease confined only to these 'groups at risk' has been passed. Subsequent knowledge has ascertained that bisexuals and people who are given to promiscuous sexual relationships are potential carriers and transmitters of the disease. One is dealing with generic categories whose members habitually practice 'forms of behaviour at risk' but which do not constitute a well defined sociological group within which there could arise the previously mentioned sense of group co-responsibility. For this reason, the task of information in their case lacks the support of such a factor of solidarity and can have a preventive effectiveness only through an authentic per-

sonal process of assuming responsiblity.

On the other hand, the members of these generic categories escape a clear social indentification because they rarely openly declare the behavioural habits of their lives. Consequently, it is more difficult to protect oneself against them in the way that one can with drug-addicts and, even though with greater difficulty, with homosexuals. It is not, therefore, to be imagined that one should take appropriate precautions against the contagion with individuals whose interpersonal behaviour, which places the partner at risk, is not known about, particularly by the marriage partner and closest relatives.

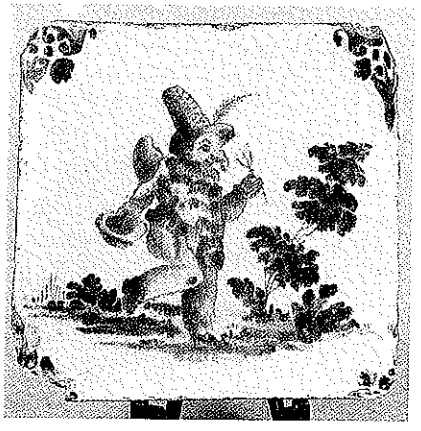
It is not even to be imagined that one should subject to the virus to a test for seropositivity. A wide part of an entire population whose age makes it especially susceptible to this kind of relationship. A very serious general state of psychological-existential unease would follow, of anxiety- suspicion, because of a great increase in fear of the disease. Even today, proposals to proceed in this way — although with the greatest discretion — with all those who find themselves in situations of forced co-habitation, such as barracks or prisons, meet with strong opposition in the name of respect for the person. And yet it is well known that the percentage of prisoners who have committed crimes connected with drug-addiction (from theft to personal violence) is now very high, and that violent subjection to sodomy is not at all rare.

For all these reasons, responsibility becomes, on the one hand, a general necessity of a bilateral kind — or, rather, for both parts: the active and the passive — which requires a sense of solidarity which is without frontiers. On the other hand, it can no longer be limited *only* to a necessary prevention of dangerous *effects* which are potentially involved in definite styles of life. These must be taken into careful consideration because they involve (and I repeat the point) interpersonal relationships whose level of possible indirect or direct contagious recurrence is by now indeterminable.

However, the critical discernment of the legitimacy or illegitimacy not only of methods but also of dangerous life styles comes up against serious cultural difficulties, as I have previously observed. In synthesis: the refusal to recognise the existence of an *objective* order in human relationships; the success of the autonomy of personal choices of self-fulfillment; the individualistic determination of what is good (and ordered) and what is bad (and disordering). Without doubt, such a broad solidarity-inspired responsibility required in the case of AIDS finds support and encouragement in the Gospel message of universal human brotherhood. An authentic and lived faith of the believer points out not only the negative duty of not causing damage to other people, but — at a higher level and involving a more difficult personal effort — the positive duty to act for their real good. From this evangelical point of view, the Church has never approved of the forms of behaviour we are talking about, because of their intrinsically disordering nature.

But the appeal to faith does not find general acceptance in the present situation of widespread religious agnosticism and theoretical and practical secularism. The evangelical message for man, and therefore Christian morality, are consequently regarded as one *opinion* among others, certainly respectable but lacking objective validity and therefore acceptable only for a possible personal choice of faith. Because of this the Church and the believer cannot, and even less must not, stop spreading and expounding the Gospel message which, according to the forceful statement of John's Gospel, 'illuminates' the human condition and its well-being with 'real light'. But the diffusion of this message must now be accompanied, in the case of AIDS, with a complete and structured attempt at solidarity-inspired responsibility. It must take advantage of all the forms of humanistic and scientific knowledge on the lifestyles connected with AIDS, and, as a result of its objective relevance to the human condition, it must be acceptable to believers and nonbelievers alike.

The reflections which follow belong to a line I have just presented. They are not, however, a point of arrival, but rather a point of departure, because they seek to stimulate cooperation among experts in those various fields which have been examined.



4. Lifestyles at risk

I think it is more appropriate to analyse those lifestyles (or forms of behaviour) at risk in two stages which are connected. In the first stage one must be aware of the harmful latent capacities that they possess; in the second stage one must examine possible repercussions in the particular case of AIDS.

The first stage, on which I will now dwell, involves an analysis of these lifestyles at three levels: naturalistic, social, and moral.

A. *The naturalistic level*. This is concerned with — and the point should not be forgotten — the psychosomatic unity of the person, to which much ascertained damage is done and which in turn falls directly on the *agent*. The case of drug-addiction offers a large amount of incontrovertible proof of this. In actual fact, drug-addiction causes: 1) a general immunological deficiency and thereby a state of diffused physical weakness and psychological unease; 2) a dissociation between the psyche and the soma

which gives prevalence to the first over the second, thereby causing escapism in the mental-world which is not easily sustained and tolerated by the corporeal faculties; 3) a progressive weakening of the will and of self-control; 4) and as a result, there emerges the possibility of a fatal outcome, as occurs with the use of LSD or crack.

The case of homosexuality is more complicated and its naturalistic damage capacity is less obvious. It therefore requires a deeper analysis which I am not able to make. I will confine myself to certain indications which are not too risky. Habitual homosexuality does not conform to the genetic-biological natures which distinguish male from female and which have consequences for the structure of the brain and in its functions. In this case, as well, there is caused a dissociation between the psyche and the soma, with very probable harmful consequences for both and perhaps especially for the former because of the psychological anxiety which is caused by the difficult search for a partner or by frustration and the impossibility of procreation. The psychological (but not the somatic) damage can be eliminated if mutual consent as to its habitual practice is reached, but this brings a closing in of the person into his own diversity, his being different from the much larger number of heterosexuals. This he does, sometimes out of pride and sometimes out of fear, but this also, for its agents, has its own psychological-existential price.

I believe that bisexuality and, above all, promiscuous sexuality are, at a naturalistic level and in a strictly biological sense, much less damaging *in themselves*. But I do not think that they escape psychological disturbances because of the instability of relationships that they cause and, especially with regard to the former, because of the clandestine context in which they occur.

I am conscious that my brief and approximate indication as to the naturalistic damage to the agent goes against the exploitation of the 'cultural' character of these lifestyles. It would be an act of irresponsibility to neglect the disturbances that they cause to the psychosomatic stability of the individual, as has been shown by the important contributions of psychopathology and/or the anthropoanalysis of the Binswanger type.

B. *Social level*. Here the ascertainable damage falls not only on the agent, but on other people as well, whether they consent or not. The daily 'crime page' offers wide coverage of this; I will confine myself, therefore, to a few references. The enslavement of the will of the drug-addict to his desire subjects him to an outright 'obligation to practice crime', even to the point of injuring his family relations, to satisfy the pressing need for drug: theft, violent extortion or blackmail, even murder, even if unintentional. The liberalization of drugs can perhaps partly eliminate these delinquent effects. But whereas, on the one hand, it stimulates an increasingly sophisticated diffusion, and, therefore, production of drugs, on the other, it does not eliminate the naturalistic damage. In different ways, homosexuality, bisexuality, and promiscuous sexuality pave the way for mercenary prostitution and various other damaging possibilities. They affect either the active individual (who is subjected to economic exploitation, to blackmail) or the passive individual (who is reduced to subjection to the point of moral subjugation and sodomy): these are situations which can create hate and feelings of revenge to the point of more or less deliberate murder. There is, therefore, a reciprocation of the damage and this also is of a psychosomatic kind. Criminology offers a precise picture, based on valid, empirical, statistical-analytical ascertained facts, of the particular criminal implications of these life-styles, according to the relationship between cause and effect.



C. *Moral level*. The various facts presented in the previous level of analysis show that these lifestyles are at risk *because of their very nature*, leaving aside their relationship to AIDS. They confirm, moreover, first of all, the insufficiency of a prevention which is limited only to avoiding damaging effects (whether potential or real), given the complicated interconnections and personal reciprocability that characterize them. Secondly, they expedite a moral judgement, to which they offer a valuable objective contribution, which corroborates the real-rational objectivity of the moral judgement itself.

In fact, the forms of behaviour under consideration are not justifiable in the name of total personal freedom of choice, because they transgress the general fundamental moral principle. This has found its most lucid modern expression in the concordant formulation given by Kant and Rosmini. This principle prescribes that one should 'never treat another person as a mere means' to achieve personal self-fulfilment and self-satisfaction. In fact they deindividualize the other person and dominatingly reduce him to an object in the dramatic game of overturning the positions of control and subjection. For these reasons these lifestyles show themselves to be objectively immoral because they do not lead to, or rather they violate, the reciprocity of that respect which every person has a right to and which makes real human co-existence possible.

A coordination of the results of the summary analyses carried out at these three levels allow us define these lifestyles as being in themselves *disordered*, with regard to their adherents, and *disordering* in their impact on the

interpersonal relationship of co-existence. In clear fashion there arises a moral responsibility on the part of those who adopt these lifestyles or perhaps impose them, but also of those who stimulate them or favour them: one is thinking, in the last case, of the producers and sellers of drugs

I have arrived at the second stage — that which concerns the specific case of AIDS — and here the discussion becomes easier and quicker. The nature of a behaviourally infectious disease, which can be interpersonally transmitted and often is not perceivable or predictable, dramatically increases the risks for oneself and for others who are already present in these lifestyles. As AIDS has its own point of germination in them, these lifestyles appear to present a *double risk*: that which is inherent in them and which can have various ramifications, and that which is supplementary and which consists of the contagious diffusion of a disease whose result has hitherto been fatal.

In my opinion, it is indisputable that this very high degree of danger involves a profound moral (personal and social) *responsibility* on the part of the agent from the moment of his ascertained seropositivity, and it determines, therefore, his duty not to cause injury to others But more generally speaking, the double risk to which I have referred confirms that it is not enough to neutralize the effects of these forms of behaviour; on the contrary, one should refrain from them. Or, rather, it is necessary to follow a positive style of life which corresponds to the human sense of existence. This is the only way which links the elimination of naturalistic and social damage for oneself and for others, with respect for the morality of personal and social co-existence in which the freedoms of each person become compatible and real.

These are the reasons why the education to achieve responsibility which AIDS calls for needs, first of all, an education to achieve a general co-existential solidarity. Scientists and humanists can and must collaborate in this endeavour with shared efforts and reciprocal trust. I do not conceal from myself that such education requires a profound cultural renewal regarding rampant moral, theoretical, and practical subjectivism. But one must not forget that the achievement of a conscience of responsibility and of interpersonal solidarity is the fundamental premise for peace among people and, therefore, among peoples

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Psychological and Neuropsychiatric Aspects of AIDS

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Introduction

The Acquired Immuno-Deficiency Syndrome (AIDS) is characterized by numerous psychological and psychiatric problems which help to make this disease now more feared than cancer, and while waiting for an effective cure, the affliction *par excellence* of our age.

Indeed, in addition to certain aspects present in all diseases which are potentially mortal, such as the feeling of imminent death, fear of suffering, uncertainty with regard to the future, and the existential reorganization of the social, familial, and work role, the HIV infection adds other problems in a special way (Nicholas 1984, Dilley 1985, Cazzullo 1989, 1989c):

1) the infectiousness and risk of ostracism, discrimination and social isolation;

2) the pre-existence of psychopathological and behavioural disturbances, above all, in the drug-addict population, which means that AIDS can appear in many cases as a pathology in which lifestyle plays a fundamental role;

3) the transmission of the virus by sexual means and the consequent transfer of the disease from the individual to the social plain.

All these aspects open up an ethical problem of vast scope, because AIDS is a private and collective disease at the same time, and must be faced considering both respect for individual liberty and effective programmes of protection and prevention towards the collectivity.

The AIDS Phobia: The Reaction of the Population to Infection by HIV

Some information relating to its masked and underhand emergence and the notion of a healthy carrier as being a person who can transmit the infection without manifesting symptoms of the disease have helped to spread an individual and collective phenomenon of AIDS-phobia (Ostrow 1988; Miller, 1988).

The pandemic diffusion of AIDS and the growing publicity on the part of the mass media on the themes linked to the HIV infection involve an ever growing number of psycologically vulnerable people who seem to use news about the disease to spread pre-existent problems of a psychological, psychiatric, or sexual character (Miller, 1987; Nicholas 1987).

These subjects are sub-divided within the category of 'AIDS Anxiety Group' and the 'Worried Well' (Miller, 1988; Hedge, 1989)

The 'AIDS-Anxiety Group' is characterized by an excessive emotional reactiveness to the campaign of the mass-media and public structures on the HIV problem.

The 'Worried-Well' group presents at the level of case history a condition of social, work and sexual maladjustment, previous contacts with workers and/or psychiatric structures or a high level of consultation with the general practitioner, repeated and negative serological tests for HIV, feelings of guilt with regard to sexuality, sexual activity at low HIV risk, and lack of clinical symptomatology. This group is estimated to be 5% of the general population (Miller, 1988) The importance of the early identification of these subjects is made imperative by the increase in the economic and social cost of health care for the subjects who are really afflicted by the HIV virus (Mann, 1988).

Psychiatric Disturbance and AIDS

The reactions to diagnostic revelation are of various kinds (shock, fear, guilt, and negation) (Fernandez, 1989; Green,1989). In each case the patients initially experience the positive result of the test as a death sentence, and develop a marked depressive reaction accompanied by signs of anxiety (Dilley, 1985; Christ and Weiner, 1986).

A condition of being seropositive without clinical symptoms allows the majority of the subjects to follow a psychological path characterized by three stages: the state of stress, that of adaptation, and finally integration.

Psychiatric disturbances are frequently found in HIV positive and AIDS patients.

There is, however, the question of how much the emotional impact of a potentially mortal disease weighs upon the psychiatric manifestations encountered with AIDS, and to what extent these manifestations are due to changes in the Central Nervous System produced by the neurotropism of HIV (Jakobsen, 1989).

Although there is a risk that the HIV infection will spread throughout the population, one should not forget that today it still affects individuals with histories and lifestyles which favour a high risk of infection.

An accurate analysis of the prevalence of psychiatric disturbance prior to the diagnosis of HIV infection has been the object of careful attention in certain recent studies.

Such psychopathological patterns are present with greater intensity in subjects with a prior amnesis of a psychiatric type and can lead to attempts at suicide.

Some authors have emphasized that the populations at major risk (homosexuals and drug-addicts) present a high rate of psychopathological disturbance prior to the diagnosis of seropositivity, like Anxiety-Disturbance common to 20-39% of the cases and major Depression in 24-30% of the cases (Atkinson,1988; Jacobsberg, 1989).

In an Italian population of seropositive subjects, Cazzullo, Gala *et al.* (1989a, 1989b) investigated the personal and familial psychopathological case-histories and the presence of early events of loss (Early Life Events: ELE).

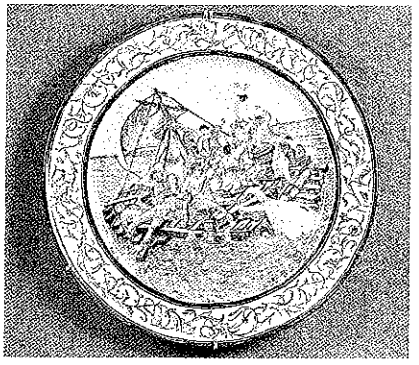
With the seropositive subjects both the rate of personal and familial case-history (respectively 30% and 28%) and the rate of prevalence of ELE (42%) was higher than in the control group.

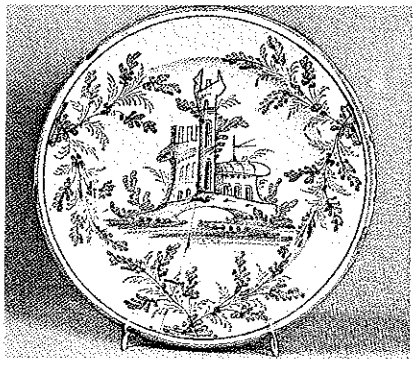
In investigating the psychopathological responses following the diagnosis of seropositivity, numerous authors have revealed that the most frequent psychopathological manifestations are disturbance of mood in 17-75% of cases (Atkinson, 1988; Perry, 1984; Dilley, 1985), and disturbance of adjustment in 50% of cases (Tross,1987).

Cazzullo, Gala *et al.* (1989a, 1989b) have confirmed the results of what has been internationally published, revealing, however, that the symptoms of anxiety and depression are more frequent among drug-addicted subjects than among homosexuals and heterosexuals.

It does not appear surprising, therefore, that according to the authors an increase in the risk of suicide, which is 17 to 36 times higher that of the general population, is registered in the subjects (Kizer, 1988; Marzuk, 1988; Pierce, 1987).

Finally, in a preliminary study, Gala *et al.* (1989) have shown that amongst HIV positive subjects the probability of attempted suicide in the period following diagnostic revelation rises from 4% at six months to 14% at 39 months (tab. 1).





Neuropsychiatric Disturbances: AIDS-Dementia Complex

The course of the infection can be complicated, above all in the most advanced stages of immunosuppression, by opportunistic diseases which are able to provoke marked focal changes of the CNS and consequent acute Organic Mental Syndromes with manifestations of a psychotic type (Navia, 1986).

The most frequent neuropsychiatric disturbances, connected with general subcortical lesions, are characterized by a cognitive, behavioural and motor deficit (Rubinow, 1988; Buono, Gala, Pergami, 1988) which has a 'chronically progressive' advance (Price, 1988). One is dealing with the so-called 'AIDS- *Dementia Complex*', which in *some cases can constitute the first* and only expression of the infection.

Because of the neurotropism of the virus it is not possible, from the early stages of the infection, to distinguish a reactive depression and a psychomotor retardation from affliction of the CNS by the neurotropic virus.

Recent research which uses the Multimodal Evoked Potential has in fact showed that in 40% of the asymptomatic seropositive subjects there is a premature affliction of the CNS in the subcortex (Ducati, 1988; Gala, 1989).

The Role of Psychiatry in the Control of the Epidemic

a) Psychosocial and Counselling Intervention

The anxiety and depressive state and the destructuring of affective, social and work relationships of the HIV patient necessitate an intervention which is not only psychological but also psychotherapeutic.

The principle objective is the supply of psychological and social support in order to face the vast range of psychological reactions which result from the disease (counselling).

This method aims to respond to four principal needs (Carballo, 1988):

1) to supply social and psychological support to infected people;

2) to underline the importance of the behavioural modifications with

the help of educational and informative initiatives directed towards specific groups at risk, bearing in mind the demographic, cultural, social and psychological characteristic of the subjects;

3) to ensure economic, intellectual and social support to HIV positive subjects in their work and family environment;

4) to lessen both the psychosocial morbidity and the burden on hospital and care services when an intervention could not necessarily be of a clinical-hospital kind.

b) The Family

A favoured area for the application of counselling is the family unit.

An important battle is waged to prevent the diffusion of this disease in this environment as well.

A family unit capable of taking in and accepting the seropositive patient can guarantee the indispensable affective support to ensure a relationship of co-operation between individuals and society.

The family which rejects, is anxious, clearly and decidedly worried, or even worse, fearful of contagion, deprives the individual of the fundamental resources which allow him to live with the disease.

However, the family is made up of individuals who have at times fragile and disturbed personalities, and these as well need help and psychological support.

The daily tackling of AIDS is not a simple undertaking since often, before the appearance of the illness, the family unit presents previous conflictual dynamics because of homosexuality or drug-addiction.

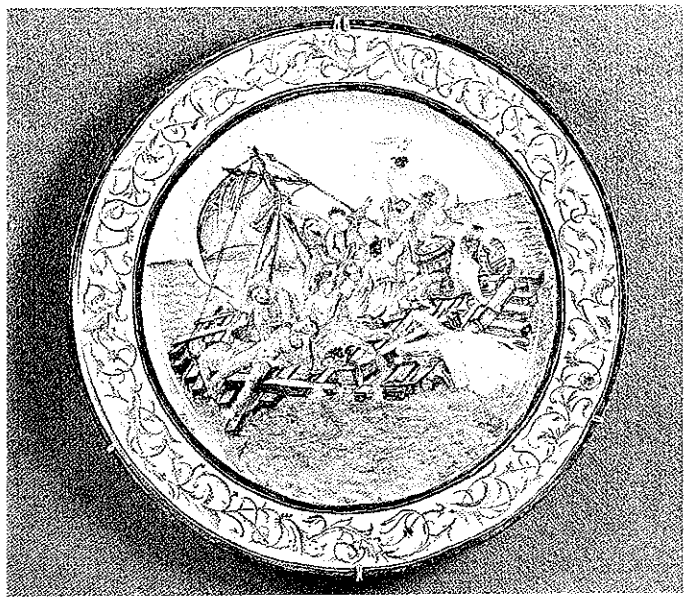
The news of the diagnosis can exacerbate these conflicts and aggravate intrafamily relationships to the level of fracture (Schwartz 1989).

There is a need, therefore, to face the spectres of the disease together with the family and to re-examine the dynamics of the role of the nuclear family itself.

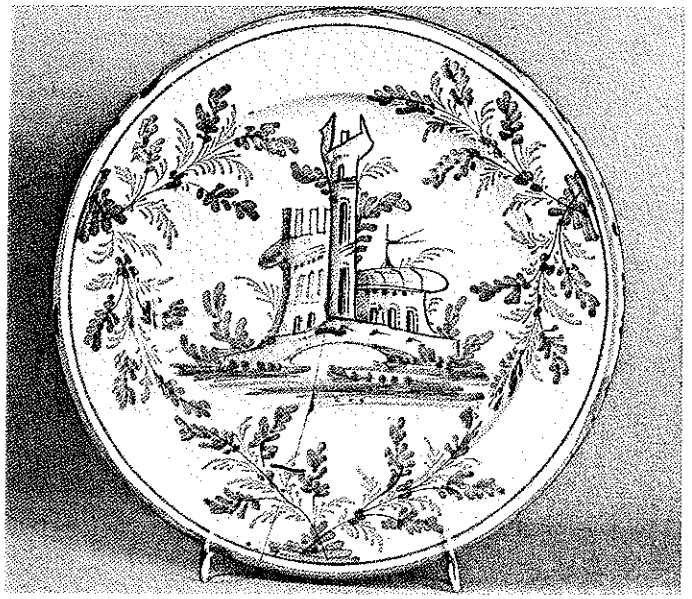
c) Health Workers

The other social group with which the person afflicted with AIDS most frequently has contact is made up of health personnel.

Dealing with patients affected by HIV poses serious problems to health









personnel: because of fear of contagion and coming into daily contact with the emotions of patients, partners, and friends.

In the area of the doctor-patient relationship, the term 'burn-out' refers to a syndrome (typical of the 'helping-professions', such as oncology and psychiatry) characterized by a tiring of the emotions caused by excessive stress connected with the treatment of serious illnesses for which there do not exist etiological and resolutive treatments (Cherniss 1983).

'Emotional detachment' from the patient, loss of interest or responsibility for one's own work, are the fundamental characteristics of 'burn-out'

In the specific case of AIDS it is therefore important to carry out interventions of support for the paramedical and medical personnel with the aim of lessening psychological stress and the consequent risk of 'exhaustion' (Dunkel 1986, Fernandez 1989).

Conclusions

The Aquired Immuno-Deficiency Syndrome (AIDS) redirects the attention of scholars towards the complicated interrelation between stress and immunomediated diseases (Solomon, 1987a).

In the specific sphere of infective diseases the strict relationship between psychosocial stressors and immunomediated pathologies such as infectious mononucleosis (Kasl, 1979) and lip herpes (Kiecolt-Glaser, 1984) has been confirmed.

The sensitivity of the lymphocyte beta-adrenergic receptors is lowered in patients affected by major depression and this confirms the strict relationship between affective disturbance and diminished limphocyte function (Denman, 1986).

A relationship between dysphoric mood, stressors, lack of social support, and high values of white cells has also been indicated (Zich, 1987; Solomon, 1987a).

The evidence in the psychoimmunological field seems to confirm that anxiety and depressive responses to a chronically stressful event such as infection by HIV can contribute together with other variables (personality characteristics, coping styles, social supports) to a temporary or definitive modification of the immunity parametres (Temoshok, 1988).

Finally, studies carried out on 'AIDS survivors' subjects (individuals who live with a declared infection for more than five years) (Solomon, 1987b) suggest a correlation between personality characteristics, coping styles, response to a stressing event, and function of the immunity system (Solomon, 1987b)

The subjects with the longest survival are aware of the seriousness of the disease but refuse to perceive it as an immanent or imminent sentence of death ('fighting spirit'), present active behaviour ('commitment') and resistance to the disease ('challenge'), accept the existential crisis induced by the HIV infection ('control') and do not display feelings of loss of hope or desperation ('helplessness', 'hopelessness').

On the other hand, there are the subjects with a fatal prognosis who present the so-called 'immunosuppression prone behaviour' (Solomon, 1987b): they suppress emotions like rage and anger, and are by tendency passive and easily prone to resignation.

These studies, therefore, show that all interventions of a psychiatric or psychosocial character not only can improve the psychical situation but also increase the defences of the organism towards the disease, prolong life expectancy, and increase the possibility that the patient can survive until effective and resolutive medicines are discovered.

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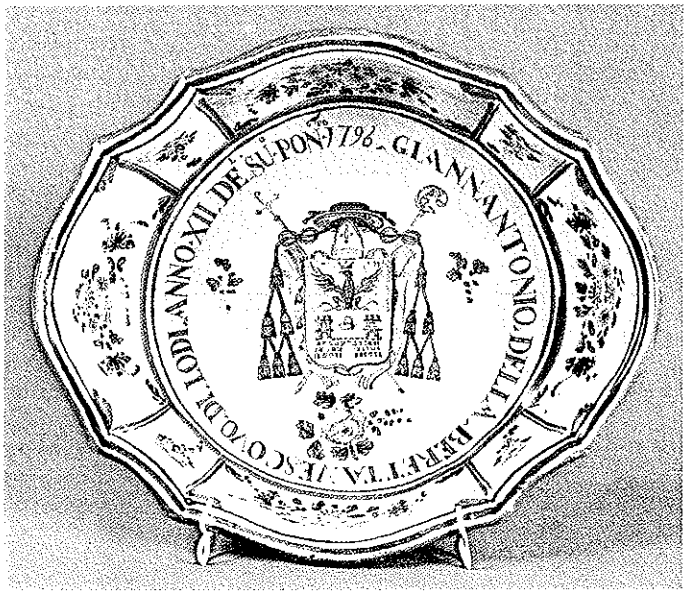
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AIDS: The Scientific Approach

Professor MICHAEL FELDMAN

Evolution is on our side

Some 2400 years ago a dramatic declaration was made in Athens, Greece: Aristotle declared that he was resigning from the Academy He had joined it when he was seventeen and studied for twenty years under Plato, later collaborating with him and, finally, conducting his own investigations. What, then, made Aristotle resign from the Academy? Plato died, and the mathematician Seppeusipus was elected President of the Academy. Seppeusius, Aristotle claimed, was a mathematician, and thus saw a static reality on observing the universe. He, Aristotle, was an observer of life-processes, and as such he saw a dynamic, diversified universe. These two views of nature were incompatible. Hence Aristotle felt that he had to leave.

If Aristotle were alive today, he would be amazed to realize that the genetic diversity within living organisms exceeds anything he anticipated.

In fact, he would share our excitement at the discovery that the most diverse, or in genetic terms, the most polymorphic gene complexes within mammalian organisms in general, and human organisms in particular, is the major histocompatibility complex (MHC). Each of us is different with regard to the complex of genes coding for the HLA molecules, the human MHC. Was evolution wasteful is generating this highly polymorphic system of genes and their products? Not at all. In fact, the polymorphism of the HLA complex is an adaptive achievement of evolution. This became evident when it was discovered that when a virus infects living cells, the viral antigens are recognized by cytotoxic T cells (CTL) of the immune system in association with cell surface molecules constituting the class 1 antigens of the MHC (1). In fact, when cytoxic T-lymphocytes respond to cells infected with an influenza virus, their responses are based on the recognition of a "processed" nucleoprotein determinant conjugated on the virus infected cell, with an HLA-molecule. Viral antigenic determinants could elicit an immune response, and confer on infected cells susceptibility to such responses only if they can bind to MHC molecules. Therefore, had not the MHC complex been polymorphic, i e, had all of us been identical with regard to the MHC system, a mutant of the Influenza virus could have emerged possessing an antigen which would not be capable of binding to that single universal HLA. Such a mutant would, therefore, be incapable of eliciting the generation of CTLs against the viral infected cells. In the absence of the capacity to elicit an effective immune cell mediated immune response, such a "trivial" virus could have eradicated by its spread masses of human beings Thus, the polymorphic nature of the HLA system is an adaptive accomplishment of evolution, protecting us against the otherwise lethal consequences of viral infections



One could have claimed that this applied to most viruses, with the exception of HIV, the AIDS-causing virus, which seems to challenge this evolutionary achievement. The HIV is a retrovirus manifesting a dramatically high rate of mutations; this could have led to the generation of antigenic variants which could evade the host immune response, because of mutants which would be incapable of binding to HLA-molecules. Yet, even here it appears that evolution is on our side: the high rate of mutations of the HIV seems to be confined to envelope determinants of the virus, whereas the antigenic determinants of the core, i e., the *gag* and *pol* genes, seem to be relatively conserved. Recent studies indicated that whereas antibodies against the HIV virus are

elicited in HIV carriers both against envelope and core determinants, CTLs elicited in HIV infected seropositive people, responding against HIV infected cells, recognize primarily *core* epitopes restricted by cell surface HLA molecules of the infected cells (2). Yet these are epitopes which do not manifest the generation of genetic diversity during viral replication.

Effective vaccines should include "core" immunogens

During the first few years of investigating the immunological properties of HIV, with a view towards the development of a protective vaccine most of the studies were focused around the envelope antigens. These resulted in a massive volume of valuable information regarding the molecular structure of the epitopes recognized by antibodies. Yet, more recently we realized, as reported at this symposium by Dr. Zaguri and Dr. Bolognesi, that in aiming at effective vaccination against the HIV, we should aim, in addition to the induction of antibodies, at the elicitation of CTLs, directed against viral infected cells (3,4). Antibodies are expected to neutralize free virus released to the serum by macrophages, or by activated infected T-lymphocytes. Yet, to eradicate viral infected cells, vaccination should result also in the generation of CTLs against core epitopes expressed on the HIV infected cells which constitute the reservoir of virus production. In fact, the observation that CTL's against core determinants were generated in seropositive but disease free carriers may reflect the function of such CTLs in postponing or preventing the actual pathogenic process. Hence progress in vaccine development against HIV should include aggressive immunization against core peptides (3). The very fact that in attempts to produce anti-idiotypes against antibodies naturally produced in seropositive carriers most of the anti-idiotypes were directed against antibodies to the p24 peptides indicates that even the immunoglobulin response is powerfully responsive to core proteins (S. Rosen and S. Waksal, unpublished). It is of interest to note that such anti-idiotypes represented the "internal image" of the antigen, and could thus be used as immunogens





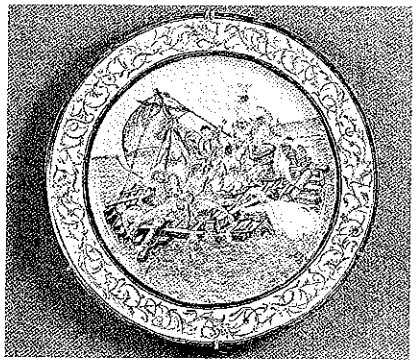
An HIV's attempt to evade cell mediated immunity

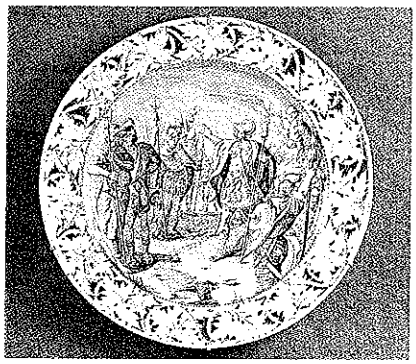
Having failed to evade CTL's immunity by the generation of genetic envelope-variants, the HIV was shown recently to manifest a property which could be interpreted as a viral weapon against the evolutionary achievement of HLA restricted cellular immune response. It was recently reported that infection of cells with HIV resulted in a significant down-regulation of the expression of cell surface class 1 HLA molecules on the infected cells (5). It is not yet clear whether this takes place only when cells are infected in culture, or whether a similar phenomenon of decreased HLA expression takes place when CD4 lymphocytes are naturally infected invivo. If down regulation of HLA gene expression does take place in vivo, this might result in decreasing the susceptibility of the HIV infected cells to HLA-restricted CTLs. Yet, at this symposium we were exposed to studies presented by Dr. Revel and Dr. Turino on the effects of interferons on cells (6,7). One of the earliest discoveries on the effects of interferon, was the demonstration that, when applied to cells, interferon elevated MHC gene expression. This indicates a possibility for the induction of HLA expression in HIV infected cells aimed at the prevention of the suppression of MHC expression and thus at increasing susceptibility to CTLs elicited following vaccination.

Gene therapy: The generation of HIV-resistant lymphocytes

Dr. Gallo's presentation at this symposium stressed that the HIV finds itself in two distinct phases of interactions with CD4 lymphocytes: it could either have its genome integrated with the lymphocytes' genetic material, or, following activation of such lymphocytes, reach a state of virus production, resulting in cytolysis of the T-lymphocytes (8). Dr. Zaguri's studies taught us that virus production can be induced in lymphocytes within which the HIV genome is integrated by stimulation with antigen or with T-cell lectins (3). Yet, it is impossible to predict when, in vivo, an infected lymphocyte will turn on its molecular machinery, resulting in

virus production. It thus appears that the integrated state may last for very long periods, in fact, for a number of years, prior to manifesting the state of virus proliferation. An immune response against the virus, including CTLs against viral infected cells, may not recognize these lymphocytes since at these latent phases they do not express viral antigens at their cells' surfaces. Such virus-integrated cells may thus constitute a time-bomb, which may explode with virus production at unpredictable times, to infect other 'innocent' CD4 lymphocytes and thereby further continue the infectious cascade. It is thus far impossible to prevent cellular virus explosion. It might, however, be possibile to prevent the subsequent infection of lymphocytes by the viruses released from the activated lymphocytes. This could be achieved if we were able to render lymphocytes resistant to HIV infection. A theoretical way to achieve this is to transfect normal bone marrow cells with anti-sense RNA for the HIV genes, and inoculate these cells into the virus infected recipients. The inoculated bone marrow cells would reach the recipient's thymus and differentiate there to T-lymphocytes manifesting due to the anti-sense sequences' resistance to the proliferating process of HIV The success of this treatment depends on the verification of two conditions: a) The expression of anti-sense RNA within the lymphocytes should reach effective, namely high levels. It appears that in recent studies using strong promoters, high intracellular expression of the anti-sense RNA is being achieved. b) The thymus of HIV infected individuals should retain its capacity to induce lymphocyte differentiation. At early stages of infection, this seems to be the case. Thus, gene therapy based on the introduction of anti-sense RNA is a notion worth exploring, aiming at the generation of lymphocytes resistant to HIV.





Macrophages: Blocking their pathogenic effects

We have thus far focused on the involvement of lymphocytes in AIDS pathogenesis. We indicated that following integration of the virus genome with the genetic material of the T-lymphocytes, the activation of the latter could result in virus proliferation and release resulting in subsequent infection of cells, and in cytolysis of the lymphocytes within which the virus replicated. This cytolytic process is a significant component in the depletion of T-cells, resulting in the state of immune deficiency which characterizes AIDS patients (3,8). Yet, the pathogenesis of the AIDS disease cannot be attributed just to immune suppression. Neither could it be a result of syncytium formation of T-cells. AIDS patients manifest cachectic processes which cannot be explained by immune deficiency alone. Rather, it appears that following virus infection, lymphocytes and macrophages secrete cytokines which have lithic effects on normal cells. Thus, AIDS patients were found to manifest high levels of tumor necrosis factor (TNF), which may be cytotoxic to a wide spectrum of normal cells (9). Furthermore, Fauchi demonstrated that TNF, or TNF plus IL-6, can activate infected T-cells to produce virus, just as they are activated by antigens or by lectins (10). This would then lead to the perpetuation of the pathogenic cascade. These observations invite treatments for in vivo blocking of the deleterious effects of TNF. It so happened however, that in laboratory animals, TNF was shown to be blockable in vivo by antibodies. Thus, septic shocks initiated by bacterial endotoxins, or by LPS in mice could be prevented by monoclonal antibodies to TNF (11). It is therefore possible that when human monoclonal antibodies (or human-mouse chimeric antibodies) to TNF are available, these may be used in attempts to neutralize in vivo TFN and thus alleviate many of its pathogenic effects in AIDS patients.

Macrophages were claimed to constitute a reservoir for HIV production. Had it been possible to cause catabolic degradation of the virus particles within the macrophages, this could have had a significant impact. Intracellular killing of parasites was achieved in other systems. Thus, macrophages infected with Leishmania could be triggered to intracellular killing of the unicellular organism by signals such as LPS plus γ-interferone (12). Nothing is known to date whether macrophages can be turned on to activate catabolic (proteolytic or nucleolytic) enzymes which could kill and degrade intracellular viruses. This obviously is a harder

task to achieve than to kill macroorganisms. Yet, applying Lipid A like molecules (the active components of LPS) and cytokines such as interferons may constitute a starting point aimed at such goals.

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In summary: I have outlined here just a few approaches which invite further investigations on the basis of research achievements of recent date during the intensive studies aimed at the prevention of the progression of AIDS disease. I have excluded remarks on future application of chemotherapy, testing drugs besides to AZT, as reviewed elsewhere at this symposium.

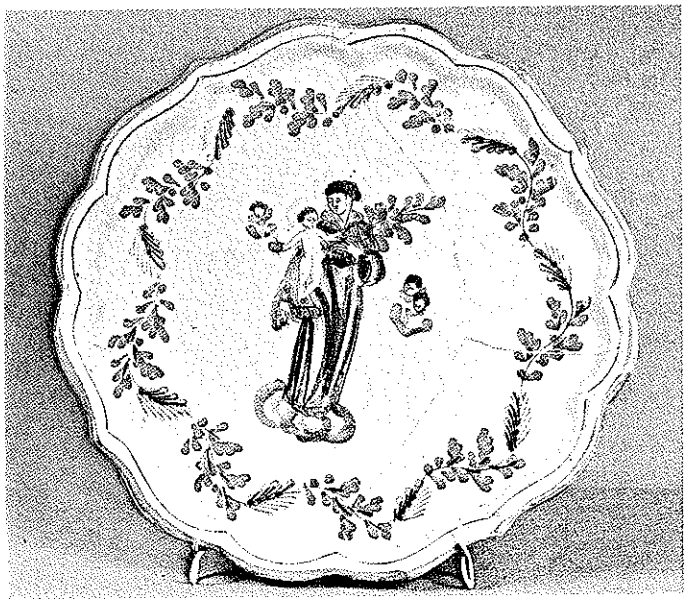
The outlined alternatives for future investigations constitute an extension of the scientific attitude and technologies to the complicated phenomena of the AIDS disease. Let us be clear about the nature of the scientific attitude. One is at liberty in selecting ethical values, political aims or social principles. In fact, it is one's duty to choose among alternative moral values. We are not at liberty to choose among scientific truisms. These are imposed on us. One may like or dislike the velocity of light, yet one cannot reject it. One may like or dislike the genetic code, yet one cannot reject it. One can like or dislike the processes of evolution, but one cannot reject them.

The scientific truisms explaining the nature of nature itself constitute a basis for further exploration of human disease in general, and AIDS in particular. The accomplishments thus far in AIDS research and treatment, based on the application of the scientific methology, furnish a sound basis for eventual success

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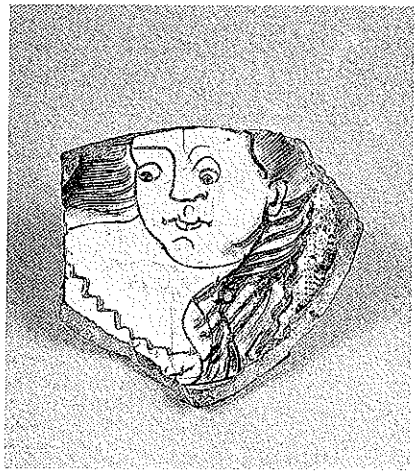
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AIDS in Mission Countries Today

FR. CHARLES SCHLECK, CSC

It is not my intention in the course of this perhaps all too brief conference to repeat much of the technical and scientific medical information which the participants of this meeting will have received or are going to receive in and through the various presentations at this International Symposium on AIDS. Others who will share their thoughts and knowledge with you are much more prepared by training and experience to take up these considerations. Thus, for example, there are those who either have informed you or will inform you of the various percentages of persons infected with AIDS or the HIV virus throughout the world, including that part of it which comes under missionary law. In fact, this matter has been and is still being deat with by the Global Programme on AIDS (GPA) sponsored and cared for by the World Health Organization (WHO). This body has done excellent work in keeping abreast of and in constantly updating its information about the rapid spread of this disease or pandemic, as reported from well over 140 countries throughout the world, many of which are to be found in the territories currently under the jurisdiction of the Congregation for the Evangelization of Peoples. As you are aware, this Congregation is responsible for some 934 ecclesiastical circumscriptions or about 38% of the total number in the Church, including the whole of Africa, practically all of Asia, with the exception of the Philippine Islands, and the whole of what is often referred to as Oceania. In addition to this, we have jurisdiction over some 52 circumscriptions in Latin and Central America, and some 18 ecclesiastical territories in the Antilles or the Caribbean.



The problem of AIDS is not just a medical problem. It is also a social and economic, a pastoral and ethical or moral problem as well, as the Bishops of various countries consulted so rightly recognized in the information sent on to the Congregation (eg. cfr. Report of the Sudanese Bishops' Conference, Acts, pp 31-32, Feb. 19-27, 1989).

AIDS is a *social* issue because it affects the young, particularly those between 20 - 40 years of age, men and women who are heads of families, and disrupts their households, leaving children without parents and older people without their younger children to care for them in their old age.

AIDS is also an *economic* problem, because this age group forms the majority of the productive population of the Third World countries. Thus, if persons in this age group should die prematurely, or should be forced through the illness to absent themselves from work, one can well imagine what this will do to the economy of a region or nation already suffering the effects of a precarious economic situation.

AIDS is a *pastoral and ethical or moral* problem as well, and therefore of the greatest interest to the Church, to pastors, and to theologians, indeed, to all Christians. To illustrate this, one has only to consider some of the following questions: "In the face of overburdened health institutions in the Third World countries, where the monies allowed for health care are not even minimal, what patients should receive priority care?" or again, "Basing oursel-

ves on the present information at our disposal concerning AIDS and the HIV virus, can persons wishing to enter upon marriage, the priesthood, or the religious life, be asked to undergo mandatory tests in regard to the HIV virus?" Any such policy, of course, would have to be based on accurate information regarding the test and its implications, such as:

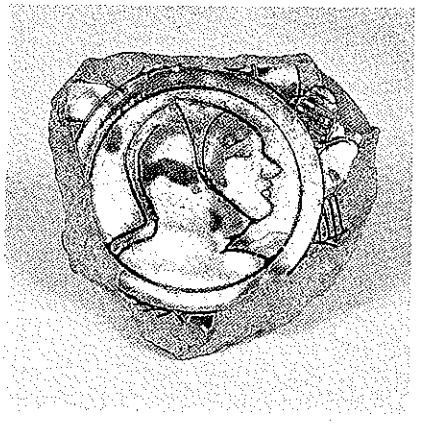
1) persons can be wrongly diagnosed because of the so-called 'window period' or because of false results, with devastating consequences, not only to the persons concerned, but also to the family and relatives;

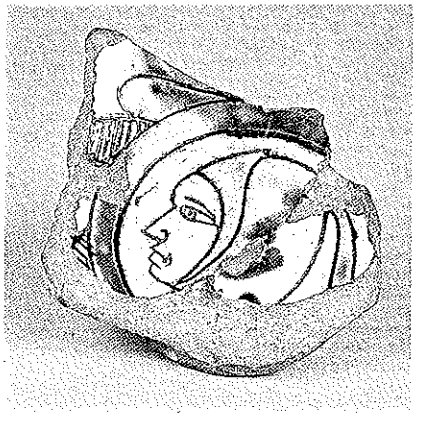
2) there is growing evidence of there being a prolonged asymptomatic carrier state where there is an absence of detectable antibodies in some people;

3) persons can be HIV positive without developing AIDS for many years, and some will never develop 'full-blown AIDS'; and finally: "Are married persons obliged to abstain from all conjugal relations with their spouses, should one or the other of them be diagnosed as HIV positive, for fear of passing the virus on to their partner?"

These are only some of the many ethical and pastoral questions which arise in reference to AIDS. But because they do exist, because AIDS is a human problem with many dimensions, including those of a strongly pastoral and ethical or moral character, it cannot be estranged from those who believe in Jesus Christ as Saviour of the World, as the One called to deliver this world from evil, from the different forms of slavery that can affect mankind. And since the church is the sacrament of salvation and the visibilization of the epiphany of God as Saviour, the Church cannot remain alien to the problem of AIDS, because those suffering from it are truly God's children, truly our brothers and sisters, members in fact or in potency of Christ's body.

In the above light, then, it should be clear that the problem of AIDS is of great importance also to the Congregation for the Evangelization of Peoples, since among the 20 countries most affected by the disease in terms of reported cases per capitaare to be found at least 10 countries presently coming under the jurisdiction of our Congregation (Bermuda, Bahamas, Congo, Guadeloupe, Burundi, Barbados, Trinidad, Uganda, Rwanda, Zambia, St. Lucia, Central African Republic, Netherlands Antilles, Malawi) While it is true that in some of these countries the number of cases is much smaller than those found in other countries of the world, the *per capita* number is much larger. Thus, for example, in Bermuda, which is a territory dependent on the Congregation for Evangelization, there were some 75 reported cases of AIDS, while in the USA there were some 65,780, according to the Panos report, 1988. But the *per capita* number of AIDS cases in Bermuda is 1,339 per one million population, whereas in the USA the number is 270 per one million population. Thus, from this point of view, it is clear that in *per capita* terms, a number of countries dependent on the CEP already have statistically more severe AIDS epidemics than does the USA. In fact, the AIDS epidemic appears to be far more serious in Africa and the Caribbean than in Europe or North America (Cfr. Panos Dossier, AIDS and the Third World, Panos Institute, 1988, pp. 30-31).





When first asked to present this paper on AIDS in Mission territories, I requested our Papal Representatives to send on to me responses to the following four questions:

1) What numbers of the population in the countries under your jurisdiction are infected by AIDS or the AIDS virus?

2) What are the causes for the spread of AIDS and the AIDS virus in the countries under your jurisdiction?

3) What efforts has the local Church, in the countries under your jurisdiction, taken in regard to the problem of AIDS?

4) What kind of assistance does the Episcopate and the local Church wish to have from the Universal Church?

The information which I received came mostly from Africa and the Caribbean, since most of the Asian countries coming under the jurisdiction of the CEP - with the one exception of Thailand - indicated that AIDS was "not a problem of great concern," and thus little interest was being shown in its regard. Moreover,

all of the information received was not of the same calibre, for various reasons, but the picture which I did receive is that which I would like to share with you this evening.

I. Numbers of those infected with AIDS or the AIDS virus

ASIA

I received reports concerning India, Japan, Korea, Indonesia, Sri Lanka, Bangladesh, Thailand, and Malaysia. With the exception of Japan and Thailand, the percentage of reported cases was either nonexistent or so low that the disease was not considered to be a problem in these countries. In Japan, where some 134 cases were reported, according to my information (although the GPA/WHO report through April of 1989, indicates only 97 cases), the information indicated that these cases were overwhelmingly to be found among foreigners and Africans, and so was not considered a serious problem by the Church or the government. The story was much different, however, in Thailand. The number infected with HIV between September 1984 and June 15, 1989 was reported to be some 7,886, of whom some 41 have died of the disease AIDS. In the north of the country, the prostitute community was the most seriously affected, and random tests showed that 44% of them have the AIDS virus. Health authorities, however, seem to wish to hold back the official AIDS figures to protect the country's booming tourist trade (some 50 million persons annually).





OCEANIA

The reports coming from Oceania also indicated that the number of AIDS cases or those infected with the HIV virus are almost negligible, and for the moment at least, rightly or wrongly, is not considered much of a threat to the population.

ANTILLES

When we shift to the Caribbean (and I am referring to those territories that come under the jurisdiction of the Congregation for the Evangelization of Peoples), the question becomes much more serious. The Antilles region, most of which comes under the jurisdiction of our Congregation, includes some 13 independent nations. Taking into consideration the small population in the islands, the AIDS cases diagnosed there are very high. Among the 20 countries in the world with the highest *per capita* rate of AIDS victims, 6 countries of the Antilles Episcopal Conference (Bahamas, Bermuda, French Guyana, Guadeloupe, Barbados and Trinidad) are among the first 10, while Martinique, Santa Lucia, and the Netherlands Antilles are in the second 10. The situation in the Antilles has become more serious because of the seasonal migration of workers, many of whom go to the USA for a part of the year and come back infected.

AFRICA

Likewise preoccupying is the situation existing in Africa, particularly in certain parts. From 1979 through April of 1989, some 23,109 cases of AIDS have been reported to the WHO, around 16% of the total in the world. This information has come from 46 countries. According to official reports, some have very low rates (e.g. Algeria, Guinea, Benin, Sierra Leone, Togo, Gabon, Equatorial Guinea, Sao Tome e Principe) whereas others have extremely high rates (eg. Burundi - some 1,408 reported cases during that period), Congo (1,250 all reported between 1979 and 1987, with none being reported since!), Kenya (2,732), Malawi (2,586), Rwanda (987), Uganda (almost 6,000), Tanzania (4,158), Zambia (1,296). Yet these numbers do not tell the entire story. According to almost all the information which I received, these numbers are considered to be a gross understatement of the actual cases. Under-reporting of AIDS is recognized as endemic, especially in developing countries, for several reasons. In many of the world's poorest countries, where physicians and medical facilities are scarce, the likelihood of one ever seeing a doctor, much less having the disease accurately diagnosed, is remote. Moreover, the negative image of a country conveyed to prospective tourists or others by its having a large number of reported cases encourages under-reporting, as we saw in the case of Thailand.

II. Ways of transmitting AIDS or the HIV virus

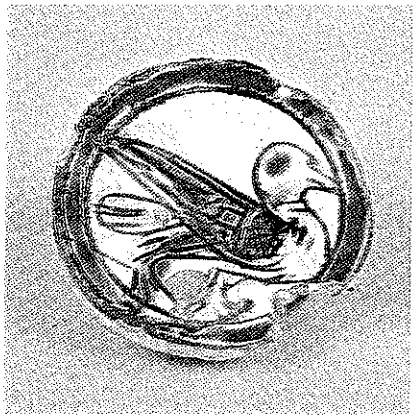
In regard to the question of how the AIDS virus is transmitted, the reports which I received indicated that

the virus is transmitted primarily through sexual contact, although other ways are also indicated in practically all of the reports, e.g. by contaminated blood and blood products, through blood transfusions, or by sharing or re-using contaminated syringes or other equipment of a cutting nature, as well as passing the virus from an infected mother to her child during or after birth. First reports indicated that about 50% of the children born of persons infected with the HIV virus would themselves become infected. (Some experts have recently revised this percentage downwards).

As far as transmission through sexual contact is concerned, while there were some differences in the reports, they more or less confirmed the results and findings obtained through the GPA/WHO reportings as well.

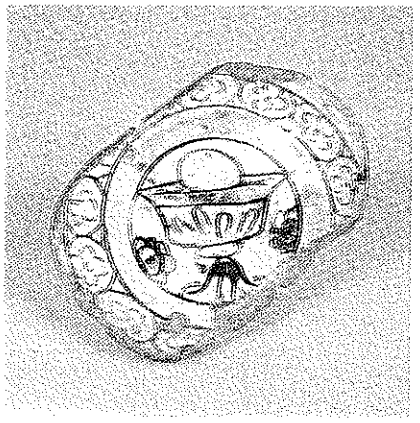
ASIA

In Asia, or for all practical purposes Thailand, from my reports, the largest percentage of those infected seemed to have received the virus through the use of drugs, something like 86% of the reported cases. Second to this source of receiving the virus, was that of heterosexual relationships, most often through a multiplicity of sex partners.



OCEANIA

From the representatives in Oceania, I received very little information about how the AIDS virus is spread. It would seem that the mode of transmission is mixed, that is, some of the cases are spread through heterosexual activity, usually in persons who have a multiplicity of sex partners, and by some homosexual activity, also among those who have a multiplicity of sex partners. Transmission from contaminated blood and perinatal transmission do not seem to be serious modes of spreading the disease at present.



ANTILLES

In the Caribbean area, in the countries coming under the jurisdiction of our congregation, the virus is passed on principally through the drug subculture (over 50% of the cases are found among drug abusers, poorly educated about AIDS prevention), and through heterosexual promiscuity, since husbands and wives frequently have sex partners outside marriage, and since prostitution is very high, as well as premarital sex among teenagers.

This situation is made all the more grave because of the emigration of a seasonal variety, where workers go to the States and come back infected, resuming their usual behaviour and thus passing it on to their partners.

AFRICA

In Africa, heterosexual contact with a multiplicity of partners is considered to be the predominant mode of transmission. This is particularly true where the phenomenon of urbanization is strong. A less frequent mode of transmission, but still frequent enough, is through the transfusion of contaminated blood, although some of the African countries are making real strides in blood-screening programmes. The danger of transmission through the transfusion of contaminated blood is rendered even more dangerous because of the elevated incidence of malaria, which, by weakening resistance systems, seems to render the likelihood of passing on the disease even more certain. Nonsterile needles and syringes also account for an undetermined proportion of infection, as well as various cutting instruments, such as razors and knives used in traditional rites, including those of a religious nature (e.g. tattoos, circumcision, unsterilized surgical instruments or dental tools). This normal pattern of transmission was broken in one of the African countries (South Africa), where the largest number of reported cases occurred through homosexual or bi-sexual activity (145 cases of 175 which were caused by sexual contact). Still another mode of transmitting the disease in Africa is transplacentally, i.e. from mother to child.

The above clearly indicates that the future of the Third World presents a rather frightening picture, unless some remedy is quickly brought to bear on the AIDS pandemic. The number of economically active young adults already infected is now estimated to be from 5 to 10 million, and is increasing daily. The pattern of population growth in developing countries is such that the proportion of young, sexually active people — precisely those most affected by HIV — is rising steeply. Unless something is done and rather quickly, in a few years' time we may be seeing, in some he-

alth units, 2 or 3 cases of AIDS per day — enough to fill major hospitals. Primary health care could be paralysed as a system, and AIDS could devastate the feeble health care services available in some countries

Moreover, the consequences are rather frightening. We will be faced with:

1) an increasing number of "dependents" left to look after and provide for other "dependents," thus radically changing the traditional family structure in the Third World;

2) a growing number of households losing their income earners;

3) an increasing number of orphans and children infected with HIV;

4) fewer people in the work force, with the growing problems this presents to the already impoverished economy of Third World countries;

5) growing numbers of disabled persons or those with diminished capacity for productivity;

6) an increasing number of human rights issues, not the least of which are those touching upon legal problems, such as the right of children to inherit;

7) growing demand on health care sectors, such as facilities for diagnosing, treating, and caring for AIDS patients;

8) an enormous need for information and education of the general population.

This is only a partial listing of the problems, but enough to illustrate that AIDS is not just a medical or clinical problem. It is a much wider issue with enormous implications that are deeply challenging to a dedicated Christian service. The AIDS or HIV pandemic presents us with an unprecedented opportunity for responding to the challenge with disinterested love and without prejudice according to our Christian tradition of mercy and compassion for our neighbour, who is every man or woman.





III. Responses of the local Churches in Mission Territories

In answering this question, the various reports coming from the Papal Representations throughout the mission territories varied a great deal.

ASIA

In Asia, for the most part, since the problem is not seen as highly effecting local scenes (e.g. in Bangladesh, India, Sri Lanka, Nepal, Indonesia, and even Korea), very little, if anything, has been done by the local Church. And even in Thailand, where the disease has indeed made inroads into the population, as yet no *official* statements or programmes have been undertaken by the local Church.

OCEANIA

Likewise in Oceania, the local Churches have not as yet established any particular response (such as an Office or ministry) for AIDS or the HIV virus. For the present, *this disease is considered like any other*, and those affected by it are included on the rolls of the sick and are pastorally attended and visited accordingly.

ANTILLES

The answers coming from the Caribbean were very encouraging. There, some or all of the following initiatives were reported:

1) some dioceses are calling for moral renewal, a return to traditional Catholic morality: no sexual relationships before marriage, and complete fidelity to one's partner in marriage. This is being preached in sermons and homilies and is disseminated through radio programmes sponsored by the Church.

2) In some countries of the Antilles, Caritas International has established working groups to monitor its programmes in combatting AIDS. At the same time, it has appointed Bishop Guilly, former Bishop of Georgetown, and presently Director of the Secretariat for Integral Human Development and Welfare of the Antilles Episcopal Conference, to exercise special vigilance over the disease in the Antilles Episcopal Conference Area.

3) Support groups have been established in some dioceses. These have multiple responsibilities (education, visiting, counselling victims and their families, securing justice for AIDS victims and their families)

4) Youth programmes sponsored by the local churches are addressing themselves to this question, giving young people proper and adequate

education in regard to the whole question of AIDS.

5) In Jamaica "Crisis Lines" have been set up.

6) In the Bahamas, there is a programme for training volunteers for ministering to AIDS patients and their families. These persons are often assigned to specific persons and families, thus providing companionship, care, support, acceptance, and dignity as these persons prepare for the death of the one infected with the disease.

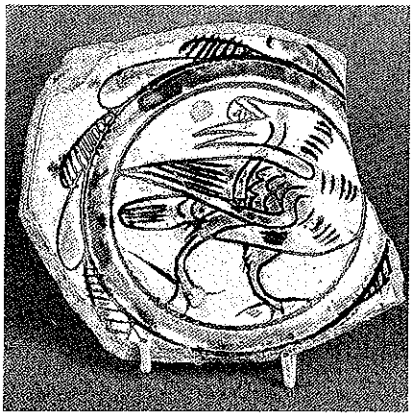
7) In the Bahamas also, a brief but very lovely Pastoral Letter by the Bishop was read in all the Churches of the diocese on the Feast of the Exaltation of the Holy Cross in 1988.

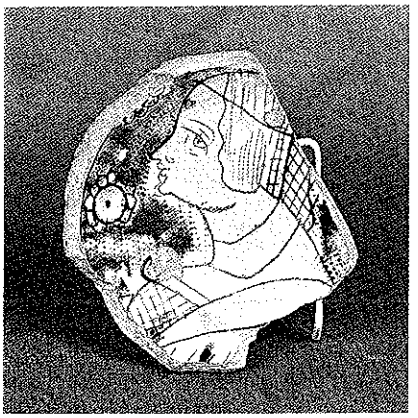
8) And, finally, in several countries of the area, the Church is represented on National AIDS Committees established by the governments

AFRICA

When we come to the Church in Africa, according to the Reports I received, the response of the local hierarchies is extremely varied, ranging from little or almost nothing, e.g. Ethiopia, where Mother Theresa has opened a house for AIDS in Addis Abeba, or Mozambique and Madagascar, which do not consider AIDS a serious problem, and even Cameroun, where it was reported that the Bishop of Bamenda issued a pastoral letter on Good Friday — having excellent results — opposing propaganda for using prophylactics, and where the Cardinal Archbishop of Garoua, in the course of a homily in January 1989, spoke strongly against following the lead of certain foreign organizations encouraging artificial birth control and the use of condoms, both judged by him to be immoral responses to the problem, and where the Nunciature sent a representative to a meeting in Yaounde concerning the fight against AIDS.

In other African countries, the local hierarchy is now beginning to move (e.g. Uganda, Angola, and Rwanda). In this last-mentioned country, last May the Episcopal Conference issued a statement concerning the importance and need for moral education and information, for helping the sick medically and pastorally with great charity and compassion, recognizing their need to intervene to teach that:





1) AIDS is not to be considered a punishment from God;

2) the use of preservatives constitutes a grave moral danger inciting moral disorder;

3) there is need for the Catholic community to react against fear and undesirable family consequences, such as divorce (even murder), solitude;

4) there is a need to struggle against charlatans;

5) there is a need to educate the young in values of purity and conjugal fidelity;

6) there is a need to insist that Christians be living witnesses of Christ and animated by a courageous charity towards the sick;

7) there is a need to request a missionary to help them prepare a pastoral letter on the question of AIDS and the HIV virus, which would, in addition to the above, also point out that there are many innocent victims of the disease, such as spouses infected by an unfaithful partner, and children.

Other Episcopates that are beginning to show an ever-greater concern over the question are Sudan, Zaire, Kenya, Burundi, Nigeria, South Africa, Botswana, and Swaziland, with responses that reflect to a greater or lesser degree those indicated for Rwanda.

And finally, there are those African countries which, according to the Reports I received are responding quite vigorously to the question and problem of AIDS and the spread of the HIV virus. Thus, for example, Zimbabwe, Tanzania, Lesotho, and to a somewhat lesser extent, Ghana, and even Sao Tome e Principe, and the Central African Republic. In October 1987, the Episcopal Conference of Zimbabwe issued a Pastoral Letter entitled "AIDS and our Moral Responsibility," which addressed the five following topics:

1) *Modes of Infection*;

2) *Christian Morality* (chastity before marriage and fidelity to one's partner after marriage);

3) *African Traditional Values*, in which the virginity of both bride and

groom were highly praised and expected, with damages to pay if there was an infringement of virginity;

4) *Message for youth* indicating that both partners to a marriage should feel free to ask for an assurance that their future partner is free of infection, even if this should mean taking blood tests to reassure themselves; and finally

5) *The Christian Response to the Afflicted*, highlighting the need to have accurate information about AIDS, the need to be receptive to those who are afflicted, and to show them compassion, without making any moral judgement in their regard, the need to offer personal assistance especially to terminal cases. Less than a year later, another Pastoral Letter from *all* the Christian denominations in Zimbabwe was issued, entitled "AIDS and the Christian Response" In December of 1987, a National Seminar on AIDS was sponsored by the Committee of priests and doctors who had drafted the Pastoral Letter of the Catholic Bishops, attended by a representative from each of the six dioceses in the country (To this Seminar, other Churches also were invited to send a representative, and three of these did).

A good number of practical conclusions were reached through this Seminar, including, among others, the need to establish resource persons in each locality of the country, to be lodged with the local hospitals, for the purpose of counselling AIDS patients and their families, the moral obligation for medical doctors to inform their patients if they were HIV positive or had contracted AIDS, and for these medical doctors to inform their patients that these latter had a moral obligation to inform their spouses or sexual partners about their own condition, to save possible further spread of the disease. (Cfr. A Report on AIDS for the Zimbabwe Association of Church-Related Hospitals by Fr. E. Rogers, S.J.)

In Tanzania also a vigorous response has been made by the Episcopal Conference, which issued a policy statement on the "Moral, Ethical, and Pastoral Implications of AIDS." The following positions were therein indicated:

1) we need to call for a return to the central and traditional doctrine of Christianity and to the sanctity of the human body;





2) we need to have compassion for those already afflicted, and to undertake a vigorous campaign to educate those at risk, due to sexual irresponsibility;

3) the use of condoms or other prophylactics as a means of minimizing the spread of AIDS or resorting to abortions of pregnant women infected with AIDS remains immoral and unacceptable;

4) while AIDS is a consequence of the wanton disregard for the laws of nature, the afflicted and society in general should not lose hope or faith. Rather we are to heal and renew each other, if we are to be the embodiment of God's life and love;

5) the future of our society depends on the rediscovery of the known Christian moral code, which accepts that sexual love in its fullness is to be experienced only within lifelong and faithful marriage;

6) it is still possible for our society to draw back from the brink and lessen, if not entirely eliminate the AIDS epidemic, or at least learn from it;

7) we need knowledge and the skill of our doctors and other professionals; but more especially, we have to learn to live and love in a more genuinely human way, believing that God trusts His People with their moment of trial in history (Statement of 24 November 1989).

IV. What the Local Churches in the Mission Territories would like to receive from the Universal Church

While the responses which I received from the various Papal Representations in the mission territories vary on this point — some asking for nothing, some rather modest in their requests or hopes, others more detailed — think that I can sum them up in the following list:

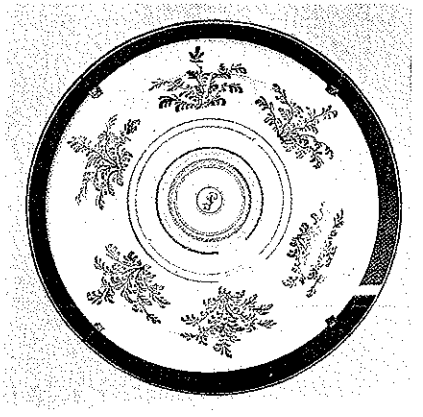
1) Most countries in Africa and the Antilles ask for assistance, for programmes (and even for personnel), for massive education of the people. This request includes audio-visual aids, pamphlets, or other educational materials. However, some indicated that the actual elaboration of

such educational materials could wisely be left to the countries requesting the assistance, since they are more culturally attuned to the way in which the local peoples think and express themselves, and they are also more closely aware of the real needs of these peoples. At any rate, it would seem advisable for those local churches of the First World or those of the North, to clearly ascertain from the local churches of the Third World or the South what precise kind of educational assistance would be most useful, even should this mean, in some instances, financing the work of the local Churches. Suffice it to say that there exists in many countries of Africa, such as Tanzania and Uganda, a large shortage of reading materials concerning the history of AIDS, its mode of transmission and of prevention, available at a cost which the general populace can afford. The request for educational assistance would include also the financing of educational programmes such as the organizing of workshops, paying for the transportation of those who will give these workshops and/or those who will attend them.



2) Another request made by most of the African countries and those of the Caribbean was for material assistance in the form of diagnostic kits for determining the presence of AIDS or the HIV virus, for disposable needles or syringes, for gloves, for adequate cutting instruments, for sterilized sutures, for dental equipment for extracting and caring for teeth; for medicines useful in controlling the disease, all of which are prohibitive to the financial conditions of peoples and governments in the Third World.

3) Still another request addressed to the Universal Church was the issuance of a document giving clear and precise norms and guidelines on the moral and ethical issues involved in AIDS, e.g. the question of testing before marriage with the obligation of making one's prospective partner aware of one's condition, the responsibility of one who is HIV positive to inform his or her spouse of one's condition, the obligation or not of abstinence should one be found to be HIV positive, the obligation or not of having or avoiding children, should one be found to be HIV positive, etc.



Any such document should include a decided pastoral approach in which the meaning of life and marriage, of a healthy vision of human sexuality as a loving and life-giving force, instead of mainly an expression of self-gratification, should be indicated in the light of the Gospel.

This document should also present the attitude which human beings should take in the face of AIDS patients, an attitude of understanding, of compassion, of a willingness to be near such persons and their families instead of avoiding or ostracizing them.

It should also state that all Churchsponsored health units must be open to the reception of AIDS patients.

4) Another request made by several countries was for the Universal Church to assist in the establishment of Church- sponsored health clinics, including those of a mobile nature where care given would be a living expression of Christ's attitude towards those who are sick.

5) Still another request made by some countries was that of financial and educational assistance for establishing support groups in dioceses and parishes for AIDS patients and their families.

6) Several countries spoke of the opportuneness for the Catholic Church to establish a team of persons and means for prompt intervention in various parts of the world to assist the local Churches in facing the growing problem of AIDS.

7) And, finally, several countries spoke of the need for the Universal Church to create an international, interdisciplinary study group to which various local Churches could present their experiences in regard to the problem of AIDS and their questions in regard to ways and means of facing problems that have been encountered and were not able to be resolved by the local Churches.

Conclusion

By way of conclusion, I can do no better than to quote the hopes expressed by a participant at an AIDS Seminar for some 17 Francophone countries that gathered at Lomé in

Togo towards the end of April of the present year:

"The Catholic Church has an extremely important role to play in regard to the problem of AIDS, of love and the family, and it can play this role as protector and saviour. In fact, the Catholic Church is one of the great hopes of the life, even of the survival of the world as we know it. It is the only multi-national organization that proposes a vision that is coherent with human love and the family, a vision which completely excludes reducing love to irresponsible and vagabond sexual activity and the uses which accompany those means deemed "modern" for avoiding its consequences, namely children. What other organization has such vast possibilities for education, supported by a morality that is, and must be demanding, such as purity of heart, respect for oneself and for others, the demand for preparing for marriage in chastity, for conjugal life in perfect, reciprocal fidelity ... In fact, if the Catholic Church, especially since the appearance of *Humanae Vitae* and especially in the person of its Popes, has been the object of continual and vicious attacks, it is in large part due to its firm position on love, a position which embarrasses many practitioners and theoreticians of sexual liberation and of world population control....

"If this force of the Catholic Church in the World is true in general, it is particularly true in Africa, especially in Black subsahara Africa, for two reasons:

1) it is the *only* great Institution which can make its voice heard, even in countries where Catholics form a small minority;

2) it enjoys great esteem and confidence and the likelihood of being listened to on the part of public opinion.

"In this sense, then, the Catholic Church has a great responsibility before populations and before history today. May it exercise its influence through its leaders and through the action of its organizations, whether of an educational or charitable character, as well as through Catholic Action, so that the mortal shadow of AIDS and its consequences may disappear.

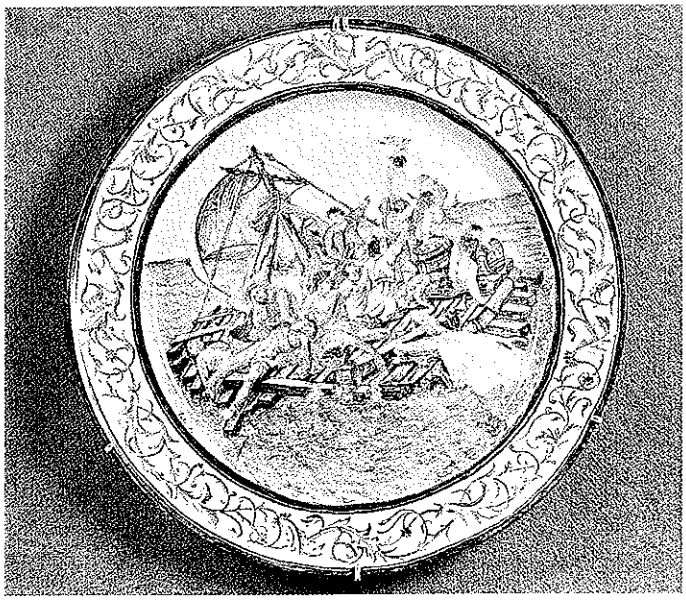
"We must hope for this, pray for this, and commit ourselves and all our efforts to this end, so that the world and the Church might continue to LIVE!"

(Rene Bel, April 26, 1989, to the Delegates of 17 Francophone countries in Lomé, Togo, Africa)

May these hopes be answered in some way by the fruits of this International Meeting sponsored by the Pontifical Council for Pastoral Assistance to Health Care Workers.

P. CHARLES SCHLECK, C.S.C.

Undersecretary
of the Congregation
for the Evangelization of Peoples



Is AIDS a Divine Punishment?

PROFESSOR ROCCO BUTTIGLIONE

The title of this paper is deliberately provocative. For a series of reason this disease speaks to the mental world of modern man and bears meanings which transcend the medical realm. In a certain sense this is true for every type of physical affliction which breaks established forms of human self-consciousness and leads to a re-appearance of metaphysical and moral questions which society seeks to relegate to a kind of shadow world of existence.[1] However, in the case of AIDS, this question emerges with a particular obviousness. We want here to investigate *the reasons* for this special characteristic of AIDS; the *strategies of approach* with which we have addressed the subject, or by which attempts have been made to exorcise or elude it; and the *significance* which should be attributed to this disease so as to place it on our symbolic horizon and conquer the fear and the horror that we instinctively feel for that which we cannot understand.

The Reasons

Two sets of reasons give AIDS the characteristic of begin a cultural phenomenon. The first has a structural character, the second a conjunctural character. Let us begin our analysis with the reasons of a structural character.

A. The reasons of a structural character which make AIDS a cultural and social problem seem to be three:

a) AIDS is an infectious disease for which at the moment there are no known resolutive remedies, that is to say, that can lead to a cure. The scientist is struggling to acquire the knowledge which in the future will permit the preparation of an effective treatment. The doctor seeks to alleviate suffering and to extend the life of the patient. However, anyone who is today afflicted by AIDS is forced to meditate upon the proximity of death with an intensity which is not usual in the present age—even though this was normal in other periods of human history. In this there is something paradoxical: in the end, all men die and the advances of medicine cannot in the foreseeable future alter this certain fact. Nevertheless, through an understandable psychological mechanism, while there exists the possibility of a cure, man prefers to remove the prospect of death—both his own and that of those to whom he is close. In the case of AIDS, as in the case of some other diseases with a fatal prognosis, this is not possible. Attention, therefore, must necessarily move from treatment — which is not capable of offering a hope of being saved — to the discussion of the meaning of disease, suffering, and death.[2] In this regard, it is sometimes said that AIDS reawakens, in the depths of the collective unconscious, the memory of great plagues, of the *black death* — a disease which afflicted previous phases of human history. It does not seem to be appropriate to invoke the collective unconscious or to address oneself to similar tenebrous forces and uncertain rational meaning. Much more simply, it is the human 'being for death'[3] which comes to be emphasized by the 'mortal malady'.[4] AIDS, at root, is nothing other than a fatal disease in which the essence and the meaning of the 'mortal malady' emerge in emblematic form. Such essence and meaning coincide with a 'memento mori'. Man is by his nature mortal, and he cannot establish a valid sense for life if he is unable to comprehend, explain, and transcend his own death.

b) The second reason of a structural character which gives a special meaning to the appearance of this new and previously unknown disease lies in the fact that the transmission of the infection is often linked to behaviour reproved by traditional morality—the taking of drugs and homosexuality.

It should be immediately emphasized in this connection that these ways of transmitting the disease are by no means the only ones. It is possible to become infected through blood transfusions, or by inheriting the disease from one's parents, or even — but much more rarely and only in exceptional circumstances — in the course of the meritorious activity of treating or looking after patients. It is also possible to contract the disease through heterosexual activity inside or outside marriage, and also by many other means. It remains the case, however, that the majority of victims are to be found amongst homosexuals and drug-addicts. This seems to imply that homosexual activity and the taking of drugs are forms of behaviour 'at risk' which are dangerous to health. It is easy to go from the idea that these activities are unhealthy to the idea that they are unnatural or against nature. Once again we are led back to a reflection on the meaning of illness, or rather upon the concepts of the natural or unnatural and of human nature.

c) An infectious illness — for which, moreover, we do not have available a vaccine or an effective treatment — can only be fought with effective measures of prevention. Such measures, however, come to interfere with the sphere of individual liberty in a very special way, for two sets of

reasons. In the first place, the Western Europeans and North Americans have certainly not been used to compulsory preventive measures since advances of medicine and its victories over traditional infectious diseases made them superfluous. We can imagine that any kind of infectious disease which was containable only through measures of prevention would have presented our societies with grave moral and legal problems. Is it right to constrict the liberty of movement of a diseased man or of a healthy carrier of the infection, or to force him to indicate his condition? Is this not a violation of his personal liberty? But, on the other hand, if he refuses to subject himself to controls and to take precautions so as to safeguard the health of the other citizens, is it possible to allow him to move about freely? Does one not thus threaten the health of the entire society and of thousands of innocent people who have the right to be protected? And what measures should one take to control those in the population who are particularly 'at risk', amongst whom there exists an especially high level of contagion? In the past all our countries have experienced forms of compulsory prevention which have been at times severe. But they were greatly reduced before the recent expansion in the sphere of human liberty, and where they have remained, they have been confined to cases of a strictly sporadic nature. Now such measures of prevention are being reconsidered in relation to social groups which are combative, organized, and substantial.

The second reason is linked to what has been emphasised in point b. The behaviour by which this contagion is passed affects an especially delicate sphere of existence with regard to which there rightly exists a particular susceptibility. Because of the connection which easily arises between unhealthy behaviour and immoral behaviour, and because of the fact that some of the forms of behaviour which transmit the infection are in effect considered as immoral by large sections of the population, the preventive measures, at the same time, can also easily be seen as carriers of moral condemnation, as being discriminatory and punitive. Apart from the moral substance of the problem, there arise at this point a series of problems that concern the relationship between the sphere of morality and that of law (that is to say, to what extent does the state have the right to take a position on these problems?)



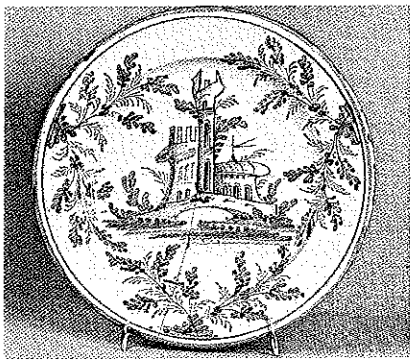


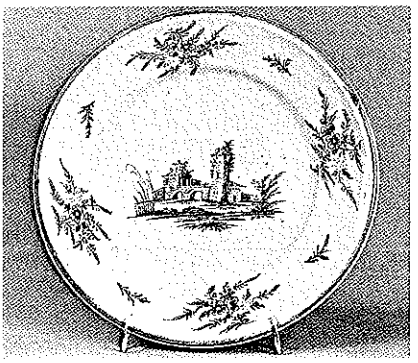
These structural facts acquire their full significance only if they are placed in the historical and conjunctural context of the moment at which the mass media of the Western countries became aware of the problem of AIDS. In the sixties and seventies an important revolution in mores took place in the Western countries—the *sexual revolution*. Its cardinal element is the cleavage between human sexuality and procreation. Few people are prepared to deny that a natural bond exists between the two. Yet this bond is attacked as naturalistic. The true nature of man, or so, more or less, it is argued, is his *freedom*. Man is not free when he limits himself to undergoing and registering the biological laws immanent in his body. He becomes free only when he works them out anew according to his own will, imposing upon them the form of his subjectiveness. Consequently, a natural and primary meaning of sexuality to which the subject should conform himself cannot exist. Man freely gives the meaning which he considers opportune to his own sexuality. The modern means of self-manipulation of the body which modern science makes available must liberate man from a sexuality understood as destiny and open him to a sexuality which is understood as free expression and creative play.

A similar way of thinking, in destroying the very idea of a nature of the sexual act, naturally abolishes the difference between unnatural and natural acts as well.[6] If man freely invents his own sexuality, if sexuality is not linked in the least to procreation by a bond which is of moral importance, it follows that it is not seen why homosexual sexuality must be penalized in favour of heterosexual sexuality. A disease which selectively afflicts homosexuals certainly puts the ideology of the sexual revolution into a state of crisis. Homosexuals, after leaving a situation of discrimination, and having been directed in aggressive fashion towards an affirmation of their own normality, or rather of the nonexistence of a canon of sexual normality, see themselves contradicted by the indubitable fact that at least one relevant difference certainly exists:

homosexual behaviour carries a risk of contagion which is not associated with heterosexual behaviour (or which is present in heterosexual behaviour to a much lesser extent). Homosexuals see a threat to their social acceptance in every preventive measure. Something similar happens with the drug-addicts. The dominant culture of the sixties and seventies tended towards a legitimation of the use of drugs. This was based on the conviction that in this as in other fields there is no difference between what is normal and thus proper and what is instead abnormal and wrong. With the crisis of a fundamental and objective reason which distinguishes what is right from what is wrong, there triumphs a reason which is only subjective, according to which each person is a law unto himself. For reasons analogous to those of homosexuals, drug-addicts also feel that their own alternative life style is threatened.

The problem of AIDS explodes in another part of the cultural context: the success and also the incipient crisis of a technological-medical ideology. In a certain sense, one is dealing with the medical version of the general scientism of our society. It is thought that with the great advances of the biological disciplines medicine has the capacity to resolve any problem in purely technological terms: the ability to accompany the patient towards a destiny that the doctor is unable to prevent — an aspect of the medical profession which has characterized it from its origins — is put into parentheses. In other words, AIDS directly contradicts the syndrome of the omnipotence of medicine and becomes an emblematic demonstration of its falseness. It does this through its quality of being an incurable illness or by having a fatal prognosis.





The strategies of approach

A first strategy of approach which can be adopted towards AIDS is that of the defence at all costs of subjectivity and its rights. This has different possible aspects. One can try to deny that the disease exists or that its forms of transmission are really those that are scientifically ascertained. One can argue that its importance and its effects are exaggerated by forces that uphold and defend traditional morality and seek to use AIDS as an instrument of counter-revolution in matters of sexuality and mores. Or one can maintain that AIDS was created in a laboratory by the American secret services as an instrument of bacteriological warfare—with the minimum intention of stopping it from qualifying as a natural phenomenon. Similar strategies of approach were tried in the first phase of the diffusion of the disease, but they were eliminated with the increase in scientific knowledge of the phenomenon. Then one passed to the statement that the struggle against AIDS had to be conducted in such a fashion as not to call the results of the sexual revolution into question in any way. At this point, a certain ideology of the prophylactic as a unique and sufficient preventive measure was born.

Against this first strategy of approach, which has as its basic intention the exorcism of the cultural significance of the phenomenon, one can diametrically counterpose another—one which, instead, seeks to emphasise and to simplify this significance. In this case AIDS is considered as a punishment sent from heaven to punish sexually deviant behaviour and drug addicts.

Yet this strategy as well soon shows itself to be inadequate before many of the facts of the case. The disease can be caught in ways exterior to any morally criticizable behaviour. It can be caught from the mother from pregnancy onwards, from the marriage partner, from the transfusion of unchecked blood, or in rather rare cases by other accidental means. The problem of the significance of this disease remains, and to this question we will try to give an answer in the following paragraph.

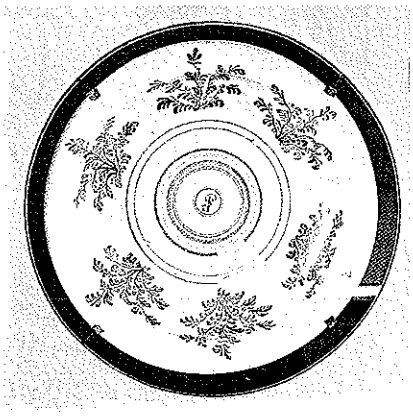
The significance

In this paragraph we will seek to answer four questions. The first is of the following character: does AIDS show that there exists an objective nature of human sexuality which is contradicted by homosexual activity? In the discussion about the nature of sexuality two incompatible and explanatory paradigms of sexual behaviour confront one another. As is known, debates between paradigms are potentially infinite and anyway of such a nature as to be unresolvable by means of simple empirical data.[7]

The claim therefore that *AIDS demonstrates* the truth of the traditional paradigm is certainly exaggerated. All debates between paradigms necessarily refer to the interpretation of empirical data. The discovery of new empirical data has an effect on the debate in the sense that it strengthens or advantages that opposing position which can more easily give a convincing explanation of the empirical data as a whole. In this more limited sense it is indubitably true that AIDS presents a difficulty to the opponents of the paradigm of traditional morality—and it does this at two levels. On the one hand, at least up till now, we know that AIDS is spread much more easily through homosexual contact than through heterosexual contact. It seems that the vagina is *naturally* predisposed to receive the male penis and that those lesions which bring sperm into contact with the circulating blood of the partner are much rarer. The mucus membrane of the anus, however, does not seem to be *naturally* predisposed for this use and thus offers less resistance to infection.



Furthermore, AIDS is transmitted through blood and sperm—two liquids of the body to which all cultural traditions attribute a special significance and place in direct connection with life. In many cultures the mixing of one's own blood with that of another is a method for establishing kinship and creating affinity. Sexual contact, on the other hand, is seen as the 'becoming of one flesh'. The moral precautions that surround it are linked, at this profound level, to the degree of the individual's commitment. It cannot be doubted that the sexual revolution is opposed to this conception of sexuality and lowers the commitment of the individual in the sexual act. It is seen not as the becoming of one but as the reciprocal giving and receiving of pleasure. And for this reason is it thought right to have a wide range of partners. Like all sexually transmitted diseases, AIDS emphasizes the special nature of the sexual act—whereby the gland of the body of one human being discharges into that of another human being and thus attains the highest level of physical contact that can be achieved in nature between two living beings (excluding transplants and transfusions), and except of course for what occurs between mother and child. The immunity system of one person enters into close contact with that of another person during the sexual act and its reactive capability is strongly reduced. In the case of mutually faithful married partners this opening of the immunity system is, however, limited and selective. When, on the other hand, sexual contacts are made more indiscriminately, the possibilities of infection are enormously increased. Homosexuals are especially affected by AIDS, not only and not so much for the reasons already outlined, but because they rarely form stable and exclusive relationships. This element of vulnerability on the part of homosexuals is shared by those heterosexuals who have adopted the life-style of the 'sexual revolution'. And it is for these reasons that the emergence of AIDS presents a new difficulty to the supporters of the 'sexual revolution' - a question to which as yet they have not given convincing answers. Overall, it seems that going to bed with a person is something more than play—that it is an act by which one establishes a community of destiny with that person which begins at a biological level. One is well advised, therefore, to be very careful in the choice of sexual partners and to limit their number. This does not necessarily lead to the strict monogamy recommended by the Catholic Church but it certainly seems incompatible with the " alternative life styles " of the sexual revolution.



The second question we seek to answer is: What should be said, from an ethical-cultural standpoint, about the problems of AIDS prevention?

In this regard, it must be observed that the Catholic Church has repeatedly been accused of wanting to instrumentalize the AIDS emergency to impose its own moral view, virtually to impose its own sexual morality under the threat of contagion. On closer examination of the facts, however, it is, rather, the opposite opinion which seems to be true. Further attempts are made to elude the real problems posed by prevention and to apply at all costs a *mode of prevention which does not enter into contradiction with the principles of the sexual revolution*.

A basic principle of prevention is that one should avoid exposure to infection, and only secondarily, when there is no choice, think of taking special precautions. In the case of AIDS this means that the first means of pre-

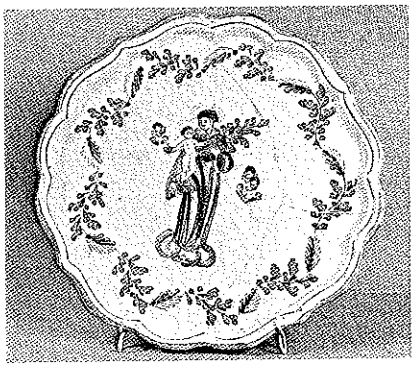
vention is an orderly sexual life, whose most perfect expression is found in monogamy accompanied by marital fidelity. It is impossible to conduct an honest prevention campaign without bringing out this fact.

Proceeding in this way is, of course, demanding and difficult. To do so we must at the same time ask about the meaning of man's body and sexuality, the value of human love, and the rules which must guide and preserve it. Such a life model is not adopted only for motives of prevention. There is nevertheless no reason to be scandalized about the convergence of the reasons proffered by prevention and those of ethics. After all, man is an indissoluble physical-spiritual unity, and it is thus licit to expect — if not a mechanical convergence — certainly some convergence between the laws of his physical nature and those of his spiritual nature. But it is not licit to deviate from this basic principle of prevention only because it may place the ideology of the sexual revolution in difficulty. This is not licit for reasons of either a moral order or practical efficacy.

From a moral standpoint, and also in keeping with the position of a pluralistic State, this would privilege the ideology of the sexual revolution, conferring upon it the status of an official State doctrine and relegating Catholic morality to the level of a tolerated view. To grasp what this means, let us imagine what would happen in the opposite case, if the Catholic Church were to require the subversion of the normal rules of prevention to defend its moral conception.

A State which formulates prevention campaigns by setting aside what for the sake of convenience I shall here term " the privilege of monogamy " judges Catholic ethics to be shameful, inhuman, inapplicable, or, in any case, immoral to the point that it feels unable to recommend behavior in conformity with it even when this behavior has in fact been recommended by medical science.

From a practical standpoint, it is certainly easier to delude oneself with the idea one is acting against AIDS by distributing prophylactics in jails and barracks instead of undertaking a difficult task of education in the sense and value of the body and of sexuality. Using a condom does not, however, guarantee complete protection and stimulates high-risk lifestyles. In the long run, the generalized use of prophylactics threatens to foster rather than extinguish the disease.





The State's guiding criterion in acting on this problem must be that the person always has rights, whereas homosexuality or the sexual revolution lifestyle does not possess rights which can prevail over the objective demands of the defense of public health and, in this case, the prevention of AIDS.

The third question concerns the attitude to the patient. Here it is obvious that the patient is simply a patient. Most of those coming into contact with him do not have the right even to know what the modes of contagion are (with the exception of physicians, who can use such information to impede further spreading of the illness). Moreover, the homosexual or drug addict, properly speaking, does not exist. The man who is a homosexual or drug addict exists. As a man, every patient has the right to be received and assisted in his suffering. Loving company helping him to work out a sense of his destiny and undergo the ordeal of illness without despair is an integral part of such aid.

The fourth and final question is that from which this paper takes its title: Can we say that AIDS is a divine punishment? Over this definition, provided by a leading prelate, a bitter journalistic polemic arose some time ago. The debate has in general failed to clarify, first, what is meant by the phrase " divine punishment, " however. In Christianity (and previously in Hebrew prophetism) divine punishment is a physical ailment God sends to his people to awaken its sleeping conscience; it thus has an eminently medicinal function. It is not sent so that the people will die, but so that the people (or, if need be, the individual) will repent and live. Secondly, and here lies the difference with respect to a certain common conception of " divine punishment, " the punishment does not necessarily strike the guilty.[9] It may affect the innocent one, who pays for the whole people - the most obvious example is Christ himself, a victim for the sins of the people.[10] Every illness and every evil, in this sense, is a divine punishment. In accepting the burden of pain and offering it for his brothers and sisters, the one stricken purifies himself and the people, participates in the sacrifice of Christ, and fulfills

what is lacking in his sufferings.[11]

If all these elements are borne in mind, we see how describing AIDS as a divine punishment does not at all imply an attitude of disdain or marginalization towards those affected, but rather indicates a way in which their suffering can take on meaning and positive value for themselves and for everyone. It is also a way of recommending them to the solidarity of all. The people in fact understands the meaning of the punishment if it is converted and does penance, and the first act of conversion is solidarity and aid to those bearing the burden not (only) of their personal sins (which may not even exist, as in the limit case of Christ), but of those of the entire people. In the Gospel this theme, already present in the Hebrew prophetic tradition, is further qualified: Jesus, " in passing saw a man blind from birth, and his disciples asked him, 'Rabbi, who sinned, he or his parents, so that he was born blind?' Jesus replied, 'Neither he nor his parents sinned, but this occurred so that the works of God would be manifested in him'. "[12] The illness is given so that healing may take place—this is an eschatological sign of God's presence in man's history. In a religious perspective, both the appearance of an illness and the hoped-for discovery of a remedy are signs of the presence of God. The moral law concerning sexuality has not of late been demonstrated by an illness tending to strike through ethically disordered sexual conduct (this may be at most a cultural crisis factor involving the sexual revolution) and does not need to be sustained by the pitiless sanction of a vengeful God.

From a proper standpoint, then, the understanding of AIDS as a divine punishment opens up unsuspected perspectives for living out suffering with a hope going beyond the horizon of death and at the same time increasing solidarity with the patient, who suffers for the faults (not only sexual ones) of all and precisely for this reason in a certain sense has a right to the support of all.

Conclusion

A presentation and outline, in cultural terms, of the significance of AIDS in certainly not a solution to the medical aspect of the disease. It is, however, important in three ways:

a. in the conquest of the superstitious horror and the irrational and shadowy forces which crystallize around the disease. The appearance of a disease bearing a fatal prognosis does nothing but represent the great questions about the meaning of suffering and of life which human culture has always sought to answer. These questions are deeply rooted in the essence of man, and the AIDS emergency makes them emerge more fully—but it certainly does not create them.

b. In the creation of a correct attitude of respect on the part of public opinion towards the ill person, and of a conscious exercise of responsibility by each individual, and in particular public authorities, for the health of the populations involved.

c. In helping individuals, and society as a whole, to live this dramatic event in truth, and to use it as a decisive opportunity to deepen the sense of man's own destiny.

Professor ROCCO BUTTIGLIONE
Vice Rector of the International Academy of Philosophy
The Principality of Liechtenstein

[1] Cf. M. Foucault, *Nascita della Clinica* Torin 1969.
[2] Cf. V. Messori, *Scommessa sulla Morte* Torin 1982.
[3] Cf. U. M. Ugazio, *Il Problema della Morte nella Filosofia di Heidegger* Milan 1976.
[4] Cf. S. Kierkegaard, *Il Concetto dell'Angoscia - La Malattia Mortale*, 2nd edn. Florence 1965.
[5] Cf. A. Del Noce, *L'Erotismo alla Conquista della Società Firenze Vallecchi s.d.*, (extract from AA.VV *Via Libera alla Pornografia*).
[6] This is the theme of the encyclical *Humanae Vitae* and then of all present debate in the field of moral theology. *Cf.* A. Szostek, *MIC Natura, Rozum, Wolnosc* Lublin 1989.
[7] On the concept of the paradigm used here *cf.* T. S. Kuhn, *La Struttura delle Rivoluzioni Scientifiche* Torin 1969, and *La Rivoluzione Copernicana* Torin 1972.
[8] *Cf.* Jonah 3 and 4.
[9] *Cf.* 2 Samuel 12: 13-19.
[10] *Cf.* for example St. Paul, Hebrews: 11-14.
[11] *Cf.* John Paul II, *Salvifici Doloris*
[12] John, 9: 1-3.



Introductory Remarks

PROFESSOR FRANCESCO ANTONIO MANZOLI

The natural history of man — his cultural and social maturation and his biological selection — is also the history of great infectious diseases which have afflicted the human species over the millenia.

Man has always endured such scourges in a passive fashion and has responded at a purely ethical and emotional level. In such misery he has displayed a nobility and greatness which have characterized the human spirit at a behavioural level and sustained, from the point of view of retrospective historical analysis, the present hypotheses on the dichotomy that has been established between psychosocial development and cultural and technological evolution.

The last century presents the great historical boundary in the approach to disease: the application of scientific method to medicine; the systematic study of causal factors and mechanisms of action; the discovery of vaccination and its subsequent application to different infectious diseases, and the large-scale diffusion of vaccination in the population. Thus have we seen disappear—or at least in the so-called most advanced nations—the terrible pictures of smallpox, TBC, and polio. We have seen such venereal pathologies as syphilis, which in Europe alone caused millions and millions of deaths, conquered with the use of antibiotic cures.

Today this new threat hangs over man. We have heard the most recent facts about this threat over the last few days or, unfortunately, such facts are shortly expected. We are not yet able to give a single therapeutic response to this threat, but we can nevertheless face up to it with correct prevention based on precise scientific and biological knowledge.

Different forms of intervention are suggested to us by researchers and medical doctors.

First of all, intervention with regard to carriers of the infection cannot be limited to clinical care alone, but must also be a support for the families and the individuals concerned, a support taking into account the relationship with those who are nearest and thus involving positions of respect, but never of pity, for the integrity of the human person. This in especially the case if these pathologies are linked to the sufferings of drug-addiction or to occasional secondary infections, as unfortunately happens with those receiving frequent blood transfusions, haemophiliacs, or children of infected mothers.

The national AIDS programme of the Ministry of Health, which is organized and coordinated by the Italian Superior Institute of Health, is, for these very reasons, carried out with objectives that are not only directed at prevention, care, therapy, diagnostic epidemiology, and basic research, but also to psychological and psychiatric aspects, so as to help



patients and health care workers, or for the study of the neuropsychiatric evolution of the child infected with the HIV virus.

From the point of view of intervention in a narrowly technical sense, the methods of transmission and the conditions and the categories at risk are now well known. However, everything which in theory could constitute a major instrument of prevention through the use of simple norms, in practice encounters very great limitations which are rooted in cultural, social, and economic conditions. These conditions do not so much obstruct the spread of correct information as hinder a receptivity on the part of individuals or categories most at risk.

In this area the mass media play a determining role, and it would not be appropriate to mystify their role in spreading possible exaggerations, alarmism, or false fears, in connection with this pathology. These have always existed and they will always exist because they are probably linked to the ancestral instincts of man.

But it would be appropriate to reconsider the instruments of social communication with regard to their highest role. That is to say, as instruments, not only of mere information, but of the involvement of public opinion in the regeneration of the motivations of individuals and the removal of the social causes which are the bases for much deviant behaviour, and thus as an impulse towards a political credibility which would know how to make both individuals and society as a whole, in a correct fashion, more aware of the AIDS question.

Thus it is that the motivation for man's choices becomes an end for man, for his moral and spiritual ethic, is the exaltation of the personality of the individual, and allows the pursuit of those same principles of the value and the sacredness of human life which, for two thousand years, only the Christian message has known how to transmit to us.

In this context the very moment of hope and of waiting for a new therapy represent a precise moment of reflection in the search — through motivations and strategies which betoken a common denominator — for higher conceptions of human behaviour.

The phenomenon of AIDS has world wide dimensions, and the problems it involves traverse the boundaries, laws, and instruments of individual states. It is, therefore, only with the support of a universal message of faith and superior moral content that in this area of common responsibility one can, today, hope to face up to such a great challenge.

The social involvement and results, even in the strictly preventive area, will thus be more meaningfully incisive the greater — and especially when above all deep-seated selfishness — is the diffusion and participation in the being and becoming of man.

I believe that these motivations of a moral kind are the important contents which distinguish and elevate this international meeting, a meeting which has been so well organized by H.E. Monsignor Angelini. And it is for this reason that I feel very honoured to be able to be present amongst you at this moment, with the wish and the certainty of being able to strengthen this message of hope through your direct evidence.

Professor F.A. MANZOLI
General Director of the Italian Superior Institute of Health, Rome



AIDS and Drugs

FR MARIO PICCHI

Franco wrote to me from the hospital during his fifth or sixth admission in three years: " Here everything is gloomy, but I try with all my strength to give a meaning to my life, through love and human relationships. When I see a boy who has been admitted walking alone, I call him over and I offer him what I have to spare: sweets, drinks..... Sometimes I try to give not only material help: talking, listening, at times for hours. To help another person is the most beautiful thing that there is. And when I manage to get up and take a few steps, I am the happiest man in the world. Every day that passes, good or bad, I thank God for the moments that He gives me and I discover that life is really a wonderful thing. I am looking forward to getting back into the fray again: I have so many things to say

Franco is one of those boys who became ill with AIDS after liberating himself from drugs, and he has managed to convey his energy and the strength of his spirituality to many other young people who are already drug-addicts and who are linked to our Italian Center of Solidarity and who live a new kind of loneliness and marginalization—something which has been curiously called seropositivity.

I went to see him. I told him: If you want to enter the fray, here is a good opportunity. I have been invited to an international meeting: I will be the spokesman of your words in front of an audience composed of scientists, researchers, Nobel Prize winners, experts on law, moralists, ecclesiastical and political authorities. What do you want me to say to them?

He answered me: that they should talk less while there are people like us who suffer. Politicians, scientists, journalists, all of them should go around hospitals, they should come and see how horrible it is to die of AIDS. What is keeping you from creating more adequate facilities?

Here there is chaos. The team of workers changes every moment; it is I who suggest a phleboclysis or the medicine, or the kind of action to be taken. What is keeping you from being more correct in the use of words? When a seropositive boy arrives, they answer him like this: you have got AIDS. It also happened to me many years ago. What is keeping you from giving us adequate spiritual help? Often even the priests do not go beyond the concept of sin and divine punishment.

Personally, young people like Franco remind me a little of prophets. Obviously, I certainly do not admire them for what they did before the day that they decided to put control of their lives into their own hands and to drop the past. But they represent a cry of alarm which has penetrated into our hearts and our consciences, pointing out to us the profound contradictions and wounds in our society. And like all prophetic presences, these young people are troublesome, unpredictable, they have rough words which are very different from the sweet and conciliating words of many other people. They mobilize consciences while others try to anaesthetize them. They are not even afraid anymore.

I, on the contrary, am very afraid. My first fear is that there will be a massacre of hope. Too often public ignorance judges the seropositive person, who is certainly ill with AIDS, as a dangerous carrier of contagion. And it condemns him to death. In spite of science and reason. Nevertheless the hundreds of case sheets of the young people admitted to the facilities of the Italian Center for Solidarity speak clearly. Many young people who have been seropositive for many years lead a normal life. They have adopted rigorous sanitary regulations; they follow careful checkups. And they show a great desire to live.

Therefore, I am afraid of the corruption of consciences, of the lessening of solidarity. I think that the atmosphere created by seropositivity, or rather by that sensation of panic and desperation which sensational journalism spreads among people, is not unrelated to the recent high statistics on the increase of drug victims in Italy. Many young people of today are not really afraid of drug, it is rather that they have difficulties in living. Behind an image of babies grown up too quickly, they discover that they are fragile, eternal losers, unable to give a meaning to sacrifice, to hope to love. In the face of a further dramatic prospect which erroneously takes the shape of an irrevocable destiny, some of them, who had a previous or potential intention of liberating themselves from drugs, began to wonder what sense there was to that renunciation. One does not usually get to suicide, proper, but things are allowed to drift, until one slides into situations which within a short time are lethal. That is why I keep on saying: only bad will come if you take hope away from a young person! You risk a massacre.

I am also afraid that the idea that AIDS is a divine punishment visited upon the drug addict could spread. In this way the drug addict would become a sort of scapegoat, even for believers. Whoever decides to recover

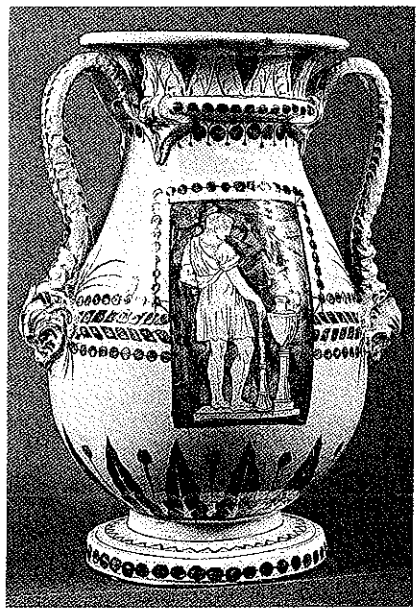
his own life has an enormous need to feel loved and accepted. It is very difficult, especially at the beginning, to trust and believe that other people can care for us. And if a person persuades himself that not even God can love him and have mercy, then his loneliness is really total.

Moreover, I am afraid of pseudo-scientific aggression. For example, it is said that the seropositive pregnant woman must be invited to abort. It is certainly important to advise her not to undertake a pregnancy and to inform her about the risks of contagion which will be run by the unborn child. But the baby's seropositivity has a different meaning from that of an adult. And then, can we put in the same statistics boys who take drugs and live in the street and boys who have been following a positive way of living for many years? Can we reduce to the same level the pregnant woman who lives in the squalor of heroin and a seropositive girl who lovingly takes care of the creature that is in her womb? In our therapeutic programmes babies have been born who were seropositive at birth and are now completely healthy.

I am afraid, finally, for seropositive young people who are engaged in a path of recovery and of that personal growth which uncertainty about the future can help to block.

For some years the diffusion of AIDS has represented a further anxiety that we must face every day when we help drug addicts to return to being free and peaceful men. The Italian Center for Solidarity, a free association established in Rome twenty years ago, has created and organized in stages a structured programme of education and treatment baptized Project-Man and is especially directed towards young drug addicts and their families. Today in our centers of welcome, therapeutic communities and reintegration communities, eight hundred young people and two thousand relatives are followed up simultaneously. And they become thousands and thousands if we consider all those who have already been reintegrated into society and how many are present in the programmes inspired by Project-Man which have come into existence all over Italy, in Spain and in many other countries, especially in Latin America.

In aiming at the full assumption of responsibilities by the individual and his rapid re-entry into society, the experience of Project-Man has showed that nobody is irrecoverable, that one can reconstruct, beginning with the positive energies which always remain in every human being. It is possible to escape from drugs and marginalization if the person makes himself an active force, and if he looks at drug addiction as a question which must be solved in terms which are essentially educational rather than medical or legal. He who takes drugs is a fragile person who needs to be strengthened, a frightened person who needs to be reassured, an immature person who must be helped to free himself from all his physical and psychic dependences.



The first aim regarding AIDS which we adopted as the Italian Center for Solidarity was precisely that of resisting the irrational and emotional wave which accompanies the themes linked to this virus. And to become, as a form of proposal, the symbol of a different way of dealing with its component aspects and its consequences.

We have not assumed any medical responsibility, but we offer support through correct and complete information on the subject, helping the young people not to dramatize and not to use fear of AIDS as an excuse for abandoning the path of treatment. As helpers we have set ourselves the task of a continuous scientific updating and we have tried to enlarge the character of our programme so as to adapt it and to make it suitable to the new demands associated with AIDS.

The first stage of Project-Man, the welcome, takes the form of a day center. In this period the condition of being seropositive can be the object of a natural repression of awareness, thereby creating a dangerous presupposition for future and new self-destructive attitudes. More often, the awareness that one can develop the disease is used as a psychological excuse with regard to the difficulty of abandoning drugs and of beginning positive affective relationships.

Our helpers' task is not to reassure, but to listen and to understand, to lead people to respect themselves, their personal welfare, to give attention to other people. It is necessary to listen to their anxieties and to support the communication of fears.

Obviously the young seropositive person can get discouraged and give

up: it is one of his rights. But what does he get out of it? Where is the advantage? One cannot go back; our past does not belong to us any more. But our future does, the future can still be led, protected and used in the best way.

What do we say to the seropositive person, to his partner, and to his parents? First of all, we say that to be seropositive does not mean that one will certainly become ill sooner or later. It just means that one is running a higher risk than other people, just as the person who is careless when he drives has a higher possibility of having an accident, and the person who smokes is more predisposed to get cancer or to have a heart attack. We add that the risk of seropositivity's turning into AIDS can be controlled, and that it greatly depends also upon the person: to react through behaviour and the will, and to respect the principles of a healthy life, are, as also happens with other pathologies, an extraordinary method of protection.

We insisit on the fact that each of them is responsible for his own future and that he must remain an absolute protagonist, taking this aspect of his life as well into his own hands. Our task is to support them, to encourage them and to involve their relatives. Never to take their place. It would mean destroying the philosophy itself of Proyect-Man.

The name of the challenge is hope. In moments of self-pity, in particular the *sincere* love of the helpers, of other young people, and of relatives, can help the person who is afraid of recovering from his desperation.

Awareness of the risks is usually higher during the residential stage — or community — of the therapeutic programme. But it is also true that the seropositive young person by now feels himself accepted by his travelling companions and by the helpers, and this helps him in his motivation to change.

The therapeutic community is a place where the care of hygiene and respect for one's own body are normal aspects of daily life. The young people are often carriers of infectious diseases, such as hepatitis and dermatitis. This means that from the point of view of the prevention of contagion the norms which have been previously followed have revealed themselves to be satisfactory.



In regard to sexual relationships, these have always been excluded by the therapeutic programme. This is to avoid young people's hiding their real problems behind sex and to give them sufficient time and concentration to discover the values of love and sexuality after years of exploiting their own and other people's bodies.

The helpers help to avoid the dramatization of the fear of AIDS and they encourage the residents to talk about it. Seropositive people are not assigned to groups or put together in the same rooms: it would be a ghetto! Sometimes, however, they are invited to approach other seropositive people, so that they can establish closer relationships of mutual help and others, in their turn, can help them to put possible exaggerations into their proper perspective.

Obviously, the task becomes more difficult when one is dealing with young people who present a more worrying clinical picture. For these people, it has been necessary to create situations which would guarantee them the feeling of being a member of the group and of full integration into the therapeutic programme, without exposing them to the danger of an excessive stress. Brief periods in the community and a stage of reintegration of a non-residential kind allow proximity to the family and an even more detailed system of medical control.

Where there has been acceptance and a greater psychological well-being, I have been a witness to situations where the symptoms of the disease have diminished. However, it is normal that a person who is psychologically well has greater possibilities of recovery than a person who is in a depressed state.

The work of assuming responsibility towards future objectives, which begins in the community, continues in the third stage; that of the progressive detachment from the programme of treatment: social reintegration. This is, for everybody, the most crucial and delicate stage, it is even more so for those who are seropositive. They are afraid that they cannot do it, will lose precious time; they desire to reach what they are aiming at as soon as possible. In a difficult moment they might want to destroy everything they had constructed, out of fear that it is useless to fight for

things whose effects they will not be able to enjoy.

Affective relationships are particularly difficult. In this stage everybody looks for a partner against loneliness. For his own tranquillity and self-confidence the boy must talk about his condition at the beginning of a relationship. If he puts this off, everything will consequently become more difficult for the affective involvement. If the seropositive person thinks that he can trample on others for reasons of self-respect, he must realize that in that moment he is not respecting even himself.

The range of situations is wide. One needs only to think about those who choose easy and irresponsible sexual relationships as an attitude of challenge and revenge. But also of those seropositive boys and girls who refuse any such relationships while their partners, who are outside the programme of treatment and who are not seropositive, are ready to have them as a proof of love.

In Project-Man no official direction is given on the kind of precautions which must be adopted: the young people are offered an orientation to take upon themselves all their own responsibilities in every field, including the sexual. Overall, a protocol on the subject would not make any sense. Personal difficulties can also be compensated for with exaggerated work and study. Or by closing oneself in the therapeutical programme, where one is accepted and loved: the other young people, in rejecting the seropositive person, would reject themselves. The seropositive person is then encouraged to talk about the rejections that he finds outside, without getting discouraged, because it is outside that one tests oneself and evaluates oneself. And, after all, in society, luckily, not everybody rejects, labels, and marginalizes.

A particular aspect concerns women and maternity. The programme tries to help them to direct their life by shifting the objective from a single aspect, that of procreation or an affective relationship, to a range of different objectives. It makes the most of other interests and stimulates all their positive energies. The same can be said about the relationship of a couple: it can be rewarding even if there is a temporary renunciation of sex and procreation.

During the conversations and the therapy groups attention is concentrated upon certain reflections. For example, upon the fact that it is possible to exploit the present positively, even before the future has been planned. One can enjoy thousands of things which make one feel alive, starting from a deep friendship for everybody. One can be an indomitable protagonist, instead of a passive carrier of the virus—that is, *a professional* of one's own condition, who treats all the dangers which can be encountered with great seriousness, yet nonetheless reacting with decision.

In the cases where the disease has already begun to manifest itself, it is important to insist on the fact that the validity of life is not judged by its length. The fulfillment of a task does not mean that one is eternal. The important thing is not the duration, but the essence. Viktor Frankl, the Austrian psychiatrist who invented logotherapy, the therapy of the meaning of life, repeats that, with death, man does not " have " a further possibility of life, but " is " his own life. He has become his fulfilled possibility. And he adds: *'If I knew that the world was going to collapse tomorrow, I would plant a tree all the same'*.



In every human being there is the need for something which goes beyond one's own I. Against selfishness, we try to propose the value of *giving*, so that one can feel useful and be useful to someone or something. The need to adopt a different attitude towards their own life is, with some young people who are seriously compromised in their physical health by syndromes connected to AIDS, in fact translated into a choice to use their own suffering in a positive fashion, to dedicate part of their free time to voluntary activity within the therapeutic programme. In this way they have got over their handicap and left a sign of altruism and service in their own existence.

When there seems nothing else to do, we are conscious of the possibility of leading the person towards an exploration of meaning, even if he does not have a faith in the transcendent. Notwithstanding his disease, the ill person can live a life full of meanings. It is important to keep morale high, so that the body can keep its functions active and the immunity system can be strengthened. We must show him the possibilities which still exist and activate the spiritual perceptions towards things that he is still able to do. There is no answer to why, but one can and must give an answer to the disease which is full of meaning.

Whatever the situation, we think it is to everybody's benefit to expand the value system and to create further educational and therapeutic situations where the prospects of achieving existential meaning are widened. The person who gives a meaning to his life is not even afraid of dying if he leaves something meaningful behind him or if a religious faith convinces him that life continues after death.

My experience suggests that each person has within him unpredictable

and formidable capacities of reaction, even when confronted with diagnoses which are difficult to accept. Faced with an uncertain future, a person always has the possibility of a positive or negative response. And his response will depend upon how much he loves life, how many positive stimuli help his path, how deep his ideal-inspired motivation is, and his capacity to still make projects. I have been present at the recovery of energies and vitality beyond any expectation. Frankl says: " Who ever really loves cannot be unhappy. "

I wonder how much love we all are able to express towards people who suffer, starting with seropositive people themselves. We have often experienced episodes of intolerance: districts or towns which opposed the establishment of a new community or center of welcome, confusing the ex-drug addict undergoing treatment with the person who takes drugs, automatically identifying heroin with the spread of AIDS. But experience, on the contrary, suggests that it is precisely these centers which are the most impenetrable barriers to the use of drugs and to traffic in drugs

But we know: ignorance breeds fear and fear breeds violence.

We ask for much discipline and courage from these young people, who are so fragile and in difficulty. But what do we offer them in exchange? I think about all the obstacles of intolerance, rejection or simply indifference that could be demolished by newspapers, television and radio if they used calmer and more correct information—information at the service of the weakest and able always to put man at the center of attention.

I think of how much good consultation centers all around the country could do, reference points which offer sustained support and orientation to seropositive people and their families. I think about the improvement which could be achieved in the health care facilities if only doctors and people working in them had a more understanding attitude and a capacity to listen—virtues which are rarely found.

I tinhk of how the departments of infectious diseases in the hospitals, and the stay in hospital of all those who need prolonged care, would be transformed if people capable of love took turns in stimulating the patients to use their own resources to recover, to regain their trust themselves, and the desire to live. These young people not only ask to be healed, but, above all else, to be treated as humans.

AIDS is a sign of the times, as everything must be a sign for us, so that we are not superficial in the face of the mystery of life. But it is not another question of blame, a punishment sent by God We must not look for scapegoats, but instead accept an even more urgent invitation to solidarity and to love. AIDS, therefore, can be a sign by which to rediscover God in His suffering and to rediscover Man in his suffering It is a way to detect the image of the infinite in nakedness, in the expressive strength of the face of another person, in its uniqueness and unrepeatability: it does not matter to whom this face belongs, to a drug addict or the seropositive person, to the prisoner or the prostitute, to the gypsy or the vagrant, to the old person who is no longer self-sufficient or the AIDS victim This face which questions us, as the philosopher Emmanuel Levinas says, invites us to respond and to assume responsibility: because the very uniqueness of the I of each of us determines that no one else can respond in our place.



Like the Samaritan on the road to Jericho. And as Luke relates, in the page of the Gospel, that wounded and abandoned traveller met his 'neighbour' in the Samaritan The perspective is clear and contrary to what we usually think: he who is ill becomes a precious cornerstone so that he who is well receives a gift, becomes richer, becomes more a man. It is in the light of this rediscovery that we can read the relationship between drug addiction and AIDS, two examples of the fragility and the suffering of man.

From his last admission to the hospital Franco wrote to me: " I want to repeat to those who are frightened that they must rely on values, on work, on friendships Do not give up, there are still so many possibilities to live. If I have the courage, with the little time that is left to me, why should you not have it as well? Alarmism does not help; faith and hope are the only winning weapons by which to feel better. "

He told me that the year and a half spent in the Italian Center for Solidarity, welcoming and giving advice to other young people in difficulty was the most beautiful time in his existence. " Today the meaning of my life could be zero. On the contrary, I go on. With highs and lows, of course. It will be a day, it will be a year, but how many days do other people have to live? Who knows. I feel protected. My first thought is God The beautiful things of my day? Even the single caress or the kiss of a person who comes to see me "

Franco knows that he has been seropositive for six years. And for a man six years are a lot. For some people they are a life.

Fr. MARIO PICCHI
President of the Italian Center for Solidarity, Rome

AIDS and Social Communications

Archbishop JOHN P. FOLEY

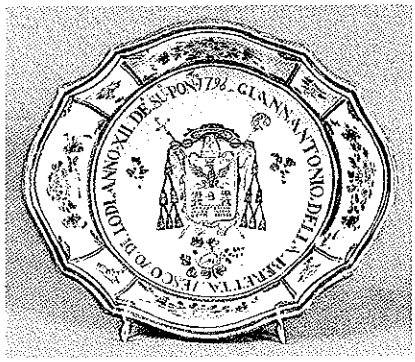
During his pastoral visit to the United States in 1987, Pope John Paul II met in Mission Dolores in San Francisco with many persons who suffered from AIDS. Not only did he speak to them; he spoke with them—and he embraced a child with AIDS to illustrate in a symbolic gesture that we must reach out to those who are ill, especially to those whose illnesses are particularly feared by others, to minister to them and to show them that God loves them and that we love them.

By reporting what Pope John Paul said and, even more, by publishing and telecasting images of what he did, the communications media reflected the constant teaching of the Catholic Church that those who suffer are to be served in the name of Jesus and that those who suffer most are to be served most selflessly. Mother Theresa's Missionaries of Charity are certainly among those who serve most selflessly. While the beginnings of their work for those who suffer from AIDS were reported quite prominently, and that was good as a reminder to all of us that we, too, should care and sacrifice for those who are ill, their continued work with the victims of AIDS has gone largely unheralded—and that, too, is good, because those who suffer from AIDS can protect their privacy and not be exploited, and because it is clear that the Missionaries of Charity serve those who need such service not so that they might be noticed but because they are needed.

While the communications media have generally responded well to publicizing the need for the treatment of AIDS and have certainly made widely known the chief means by which the AIDS virus is transmitted, there seems to be an ambivalence regarding the manner in which they treat certain situations in which AIDS can be transmitted.

Let me offer an analogy.

In television news reports and in televised dramas in the United States now, you almost never see anyone smoking. Smoking is generally considered as injurious to the health and as not to be encouraged by showing it on television. Television advertising of tobacco is banned; not even filtered cigarettes can be advertised. Advertising is rightly considered as an encouragement to use the product, and not even the advertising of allegedly safer forms of smoking is permitted so that the action of smoking itself will not be encouraged in any way.



We all realize that one of the means in which AIDS may be transmitted is sexual contact with infected persons. The communications media have made that known. Thus, the logical conclusion would seem to be that homosexual contact and pre-marital or extra-marital heterosexual contact should be avoided—strictly for reasons of physical health. It does not seem to be a logical conclusion that condom advertisements should be allowed on television. Just as filtered cigarettes are judged not to remove all the health hazards from smoking, condoms have been judged not to remove all the health hazards from sexual contact. If the advertising of filter cigarettes is viewed as contributing to an unhealthy habit of smoking, the advertising of condoms could surely be viewed as contributing to and indeed encouraging activity which can be unhealthy and even fatal.

Strictly from a medical point of view and from a public health point of view, it would seem that it is sexual abstinence and continence which should be promoted. The advertising of condoms can actually encourage people to begin or to continue activity which can be self-destructive and which certainly can contribute to a breakdown in public health.

If it has been determined that smoking can be injurious to one's personal health and to the health of others, then it would seem logical to exclude the advertisement of tobacco—including the advertising of filtered cigarettes—from the media so that such potentially dangerous activity is not encouraged. If it has been concluded that homosexual contact can sometimes result in the transmission

of the AIDS virus, then it would seem logical to exclude from the media the advertisement of any item which could encourage such contact or which could provide a false sense of security in such contact.

In fact, if the media are eager to cooperate in the campaign against smoking, at least to the extent that they do not show people smoking and to the extent that they report the effect of smoking on health, then it would seem that their commitment to the public interest and to public health should make the media eager to cooperate in the campaign against AIDS and other sexually transmitted diseases not only by reporting in full on the medical facts about the transmission of such diseases but also by not showing, insinuating or appearing to approve the activities which are known to contribute to the transmission of such diseases. In other words, the media should be supportive of sexual abstinence and continence outside of monogamous, heterosexual marital relationships—and this strictly from a public health point of view.

Another method by which the AIDS virus can be transmitted is through the sharing of needles by intravenous drug users. I have seen public service announcements asking that drug users not share needles. I have also heard, however, of individuals who have advocated that such needles be freely distributed so that the temptation to share needles might diminish. It would seem to me that publicizing in the media the availability of free needles would only contribute to the more widespread use of drugs and ultimately make available more needles to be shared. In other words, such a policy would contribute to the worsening of two public health problems instead of contributing to the solution of either.

The media have done a great service in making known the fact that the AIDS virus can be transmitted through blood transfusion. Perhaps the message of the media has not been well understood, because some people obviously thought that there was danger is donating blood, since blood donations have declined in many areas. Perhaps the media can make even more clear that the donation of blood involves conditions of the greatest possible hygiene and that indeed the need for blood from healthy, uninfected donors increases daily. The media can also make clear that public health authorities are doing all that they can to guarantee that the blood which is given to recipients has been proven through testing to be as safe as can be humanly determined.

The media obviously play a key role in the response to the AIDS crisis.

First, they have already made widely known the various ways in which the AIDS virus is most likely to be transmitted.

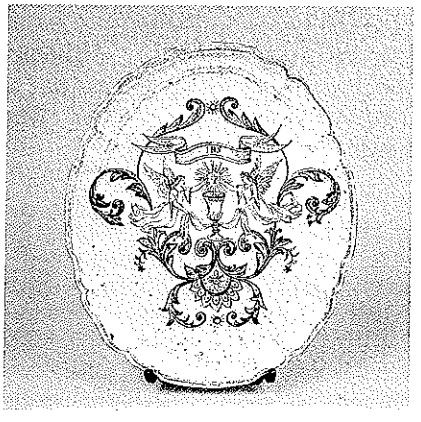
Second, they have revealed to the world the suffering of those who are ravaged by disease because their immune systems are not functioning on account of AIDS. This revelation has resulted in heroic and generous service on the part of some peoples and it also resulted in public support for the scientific research needed to discover a cure for AIDS.

Finally, however, the media may not have done enough to discourage those forms of activity which could result in the transmission of AIDS. The tolerance of the advertisement of half measures such as condoms and free needles is self-defeating and irresponsible. If the communications media are to contribute to a halt in the transmission of the AIDS virus, then they must—for the common good, for public health—advocate abstinence from those activities which can lead to the transmission of the AIDS virus or at least not appear to glorify or condone such activities or give the impression that half measures can provide security to oneself or the others.

In these reflections, I have attempted to prescind from my own moral convictions and the moral teachings of my Church, but it is not by chance that my own moral convictions, the moral teachings of my Church and my suggested prescription for the service of the common good and of public health by the media coincide—because I am convinced in this, as in so many other matters, that good morals do indeed make good medicine.

The highest moral law, of course, is charity, and perhaps our greatest need is to convince a somewhat reluctant world through the communications media that those who suffer from AIDS truly need our continuing, selfless, loving help in ministering to them in their illness and in seeking to discover the cause of the terrible plague which causes their bodies to waste away in the face of unchecked disease.

Archbishop JOHN P. FOLEY
President of the Pontifical Council for Social Communications



Public Opinion and AIDS

Hon. ALBERTO MICHELINI

The theme of AIDS, in so much as it simultaneously affects the social and individual sphere of the human person, and in so much as it seems to constantly interfere with the most intimate and reserved relationships of the person himself, cannot be seriously considered without posing questions, at the outset, concerning the deepest reasons for, and the essential duties of, our human relationships, and regarding the interpretation of the freedom and dignity of both the interior and exterior aspects of man.

By now some eight years have passed since the virus was first described, and nearly ten since the first clinical cases were registered with absolute certainty and full awareness of the disease, yet today one has the impression that the vast majority of the means of information and communication have not known how to disseminate a mature and responsible knowledge of this disease.

This is not because of a complete lack of attention to the medical and health side of the question, but because they have alternated apocalyptic visions with disconcerting silences, paradoxical simplisms with distortions of scientific analyses, false and misleading news with desperate, despairing, and tragic bulletins, without any systematic evaluation of the nature of the virus.

As a result, public opinion, which is already sufficiently corrupted by consumerism, and centred upon a selfish and soulless materialism, has been even more disorientated by the information campaign on AIDS — remaining suspended between fear of the virus and a laboured search for a prevention of the disease by merely material instruments which completely ignore the accompanying moral and ethical implications of the phenomenon.

In this fashion, without any sense of shame, and above all else without considering that one must commence with a comprehensive reflection on Man before being able to express a sound value judgement on ways of thinking about and opposing the disease, information has often yielded, in morbid fashion, to dwelling upon aspects of common behaviour (or, as could be said, the merely " choreographic " aspects) which are linked to the propagation of the virus. It has thus abdicated, from the outset, any attempt to develop critical attention of a more interior and intense nature on the part of public opinion.

In this way, terms like " plague of the twentieth-century, " " scourge of God, " and other images which are as perturbing as they are superficial, have become necessary and ineluctable synonyms of the disease, and have helped to create a widespread and suffocating sense of panic which has extended itself to all social levels.

There has been an attempt, in other words, to provoke feelings which are as strong as they are momentary, by evoking a sense of catastrophe of enormous and powerful dimensions. This with the more or less conscious aim of creating a sort of irrational and uncontrollable fear and not a real creation of awareness — that is to say, a real social and personal awareness of what was happening and what is still happening. For this reason the emphatic definitions and perturbing prophecies — and, moreover, a deliberately terroristic terminology — have been placed, like some tragic funeral mask, over the true and the only public objective which should have been pursued: the work involving a serious and extensive knowledge and identification of the nature of the disease.

With the perverse conviction, therefore, of acting in the name of human " tragedy, " information has often obtained and is continuing to obtain the discouraging and contradictory result of dehumanizing AIDS — covering its pathological nature with statistical alchemy and pyrotechnic displays, and finishing by hiding the human dimension of the virus from the intelligence of Man and from his highest and eternal feelings. Even the latest alarming data to come from the United States on the diffusion of virus amongst adolescents (it is thought one young person out of every hundred is afflicted in the cities at 'high risk') confirms what has been said. In particular, the use of the prophylactic is emphasized as being the only means of prevention.

In the extension and expounding of this grotesque message, empty of any profound human content, respect and solidarity towards the suffering of the ill person have not impeded the mass media from continuing on this course; with the excuse of helping the understanding of the phenomenon they have actually sought to investigate the most intimate and essential aspects of the human person, and have forgotten the strict relationship between a sense of shame and a revelation, through such a sense, of the more than utilitarian character of the person himself. All this has helped to further aggravate the condition of those ill with AIDS and of those who are particularly exposed to a danger of the virus; and has provoked further pockets of marginalization and rejection which, historically unworthy of a civilized society, are morally even more unworthy of a society modelled

by Man and on Man, as a thinking and thought-about being.

On the other hand, while the evolution of the virus seemed confined to the narrow band of certain particular categories — the so-called 'at risk categories' — it was considered with ill-concealed indifference and a lack of interest. Public opinion refused to take in the war bulletins on the disease and with the exception of a few noble cases buried the virus in extraneity and an occasional pious memory, and in this it was vigorously encouraged by the mass media. All this has given perfect expression to that neopositive, scientistic and base temptation which likes to see man gravely hindered in the achievement of the success of modernity by morality and solidarity: and which subordinates the progress of man to the elimination of so-called 'diversities' and to a forgetting of the pain of others.

Almost as if the dramatic level of suffering was given solely by its capacity to strike what is defined as 'normality': as if there existed a drama only when there existed a collective drama; and a drama existed only when that drama itself was not marginalised amongst the marginalized. Public opinion, which was at first sunk in a comfortable and tranquilizing process of marginalization of the disease — and completely dedicated to a strengthening of the fences of marginalization — found, as time passed, that it did not acquire a knowledge of the virus and of the delicate ethical and moral problems which are connected to its understanding, but that it often faced the fear of those who, interested in the subject and wanting to be better informed, suddenly and improvidently found themselves abandoned by their golden and empty idols and obliged to return to a reflection upon fundamental reasons and on the " why " of their own existence. At this point one better understands the basic mistake and the essential error of perspective by information in its relationship with AIDS — to have forgotten that it should have referred to the human person, and, therefore, to that person's conscience, capacity, and will to interact with other people.

Not a bestial man led by an uncontrolled and uncontrollable instinct who considers other human beings within a framework of a materialistic 'abacus logic' in which his fellows become numbers to exploit, to use or to collect; but a Man within whom above all else virtue is not fear or refusal but courage and choice.





In this way, the so-called measures of prevention and safety with regard to AIDS are not the objects by which man frees himself — or, better, dismisses himself — from his responsibilities towards other human beings; such measure are to be looked for well beyond and above instruments of preventive treatment and are to be found in the most noble and sacred human values themselves.

We should not, therefore, see the fear of AIDS and its causes as reasons for sacrifice and solely physiological refusal, and suffer from this condition, as if an essential component of the fulfillment of human corporeity were taken away; but we should rather make ourselves aware, as a result of the fundamental nature of the disease, that these reasons are wider expressions — removed from the disease itself — of a moral choice, the choice of fidelity to love, and the courage to realize oneself in a Christian manner in behaviour pertaining to the body.

Often seen by modernistic society as the deleterious effect of a conception which restrains the progress of consumer products, or considered dangerous for the triumph of a humanoid and technocratic materialism, such a choice of courage represents, in reality, the most integral and complete affirmation of corporeity in the Christian sense; on the other hand, it is a choice of courage not from a merely physical point of view, but from a spiritual point of view, in so much as the human personality is not limited within certain confines, as one could simplistically think, but these same confines come to be superseded in the superior cognition of a society founded on solidarity, and on the primary and essential values of Man as a person and as a neighbour. Choice of freedom, therefore, and in freedom, " the highest sign of the divine image, " according to the powerful expression of the Second Vatican Council; while the choice of slavery, as a preordained choice, makes man a slave of the passions and of objects — which such a choice produces and is produced by — in a circle which is without end and without hope, is that which man makes under the pres-



sure of coercion which is purely instrumental regarding the environment and the material, confusing the licence of vice with the search for virtue. In all this, naturally, it is not forgotten that, beside the personal choice of courage and virtue, which has an enormously more extensive and profound value than mere physical abstinence, there is needed a more secular choice of the social removal of the marginalization provoked by AIDS; in the awareness, therefore, of having to offer the human presuppositions of value and its analysis to science, one needs to know how to fight both the sense of indifference and abandon towards those who are afflicted, and the morbid panic caused by the illness.

With regard to the first, in whatever pathological state, it is necessary to favour the equipping and the programming of health facilities which are adequate and functional, both from the point of view of treatment and the point of view of prearranged services conceived on the scale of Man, and not a racist expression of an aberrant and mystifying social ghetto.

With regard to a second, it is necessary to favour a serious and scientifically balanced awareness of the virus on the part of public opinion, avoiding resort to—especially with regard to the mass media — terrorizing metaphors or counterproductive and over ambitious amateurisms.

However, in both the first and the second case, there exist objective difficulties and obstacles which are at times insurmountable, in the practical realization of what has been presented.

On the one hand, there is the congenital and creaking slowness, which is further aggravated by an instability of management, of the administrative services in the health sector. This slowness frustrates the rare good proposals that occur where it does not inevitably engulf them with the sad recurrence of bad proposals. In the absence, therefore, of an institutional strategy of intervention based on sound proposals, or at any rate based on objectives which are interlinked as a whole, there is an attempt to advantage initiatives which are more occasional and partial (often according to the sensibility of the structural organs concerned) and which are, in any case, from a more harmonized and programmed point of view, all distinctly lacking.

In this context, moreover, initiatives of a voluntary social-health care kind should be further promoted and more closely coordinated. The contribution of such initiatives, whether they are in progress or are only potential, is certainly essential for the achievement of such aims.

On the other hand, it would be opportune to make the media information and social communication more sensitive so that they commit themselves to not indulging, and pay more attention to not indulging, the demands of a doom-mongering frenzy, even if this often guarantees a successful impact, albeit morbid and dangerous, of the news which is supplied. But it would, however, be opportune to seek to contribute to the diffusion of serious efforts to raise awareness of the nature of the disease which would be comprehensible but of scientific value.

All this would base itself upon the social aspects and particularly upon the ethical and moral aspects connected with the disease itself, which frequently represent a much more effective and more humanly natural premise for prevention than many others which are merely material instruments directed towards the pathology.

I include by recalling a written statement of Vittorio Zucconi which was published in *Epoca* some weeks ago, which I read with great pleasure and interest. At the end of his article he said, and I quote from the text, " if AIDS has a merit among so many pains " it is that of having reminded us that no prophylactic measure will ever be able to free us from our 'responsibility' of choice.

And now, more than ever, the moment, has come, I believe, for information media to finally make a responsible choice.

Hon. ALBERTO MICHELINI
Journalist
Member of the European Parliament

AIDS and Man as the Way for Church and State

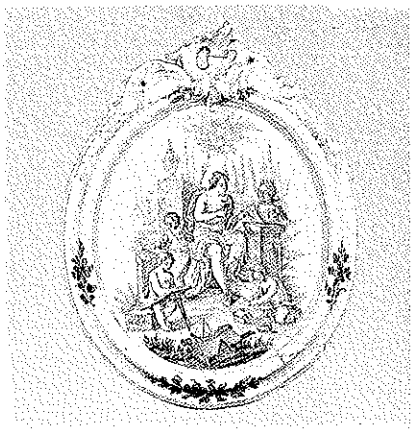
FR BONIFACIO HONINGS, O.C.D.

AIDS: an Illness

AIDS, or the acquired immunodeficiency syndrome is an illness caused by a virus which destroys the immunity system. This disease manifests itself many years after infection with very serious accompanying illnesses and with cancers. AIDS is a contagious viral disease which infects the body. Indeed, the HIV virus is transmitted by a seropositive carrier or by a person ill with AIDS or ARC through blood or sexual secretions, or, more specifically, by sperm or the secretion of the vagina. Precisely because these biological liquids are the principal vehicles of the infection, there have been references to groups at risk ever since the discovery of the disease—homosexuals and drug addicts.

The presentation of this terrible disease of the century, as it has been called, has resulted in a concentration of attention on the disease itself and on the danger of its transmission. This is clear from the global strategy of WHO, the World Health Organization: a strategy of combating AIDS by preventing and halting the spread of the infection. The European Commission has drawn up a proposed order of action for the Council which deems AIDS one of the key priorities for 1987-1989. It involves a programme for co-ordination of research in the field of medicine and health which includes clinical and immunological research and projects for the prevention and monitoring of the disease.[1]

The strategy for combatting AIDS and its transmission goes beyond such scientific research in the medical field and involves an appropriate education of, and supply of information to, the general public. The hypothesis of a change in sexual behaviour which could be a defensive measure also enters into policies of public health. This change involves sexual hygiene amongst homosexuals, information about the sexual transmission of the disease and especially about its anal transmission, information about male and female prostitutes, and the promotion of the use and the provision of prophylactics. Ideas for slowing down the spread of the disease amongst intravenous drug addicts have centred upon the choice of drugs and the promiscuous use of syringes and needles.[2] In a word: the hub of WHO's strategy for fighting AIDS — a strategy which every country has followed—consists of preventing the diffusion of the disease.



Without entering into the merits or otherwise of such a strategy, especially with regard to a subject that other contributors will consider — namely the proper instruments to be used in this strategy — I will only say that there is a task to be undertaken both by the Church and the State which is much more exacting. It is a task which arises from the fact that AIDS is not a disease *sui generis*, but something which involves a man, a human being, a person afflicted by the HIV virus. This is why the primary object of attention to which AIDS directs us is the man ill with AIDS or the man who is seropositive.

AIDS and Man

AIDS makes us think of a person who is seriously ill, who, according to present knowledge is medically incurable, and who is therefore, in practical terms, a person in a terminal condition. One is dealing with an ill person who deserves the same care and the same compassion, if not more so, than every other person afflicted by illness. Both from the Christian and the health point of view, all that the Christian message has to say on suffering and illness is of great value in the case of AIDS. In actual fact, Christ did not give abstract and

theoretical speeches in this area but presented facts and unequivocal behaviour. Through his passion, death, and resurrection he put every form of suffering, illness, and death in a totally new light—the entire world of *pathology* was transformed into a world of *soteriology*. Suffering and death itself, in the rays of the light of faith, acquire a new vitality, and through trust in hope move towards a participation in the fullness of life and joy which only the unitive force of love can offer and guarantee.

Soteriology, the redemptive work of Christ, also means, and above all else means, a struggle against the evils of illness and death. I make this obvious statement to dispell any possible doubts as to the Christian value of pain and death. We rightly read in the pastoral note of the Spanish Episcopate: " our faith leads us to think that it is a part of the plan of God that men should defeat this affliction as they have defeated so many other afflictions in the course of history, and that they should do this with their intelligence and their endeavour, animated by feelings of human solidarity and aided by God's grace. We express our gratitude to all those who work towards this admirable end in the field of science and research. In defending the life of man, they glorify the wisdom and mercy of God the Creator. "[3] With this explanation I have also sought to emphasize that AIDS is not first and foremost a disease to study, but a sign that a man is mortally ill.

At this point it is necessary to point out that the relationship between AIDS and man is based on a very special consideration: AIDS not only says something about the illness of man, but also says something about his behaviour. Cardinal Hume well defines this—what one may call the subjective relationship between man and AIDS: this kind of illness is the proof, not of a divine punishment, but of a " general law by which every action has its consequences, disorder moves inevitably and, afterwards destroys. In fact... AIDS is nothing else but one of the numerous and disasterous consequences of disordered sexual behaviour. This disorder is the fundamental cause of the present epidemic. "[4]

In relating AIDS to man, and more precisely to his disordered behaviour both in matters of sexuality and with regard to drugs, we are led to assert that medical-hygienic attention does not strike at the root of the AIDS problem. For this reason it would be misleading for anybody to seek to simply ignore the moral aspect of this phenomenon, for this would cause serious injury to those who are *presently* afflicted or are so *potentially*. We must move away from the ambiguous and inadequate strategy of prevention and treatment and enter the fight with conviction and decision, using weapons of a moral and spiritual nature. AIDS is above all else push towards moral rebirth; it " forces us to emphasize the profound significance of sexuality and the value of marital fidelity. " The statement of the Permanent Council of the French Episcopate offers a precise definition on the subject: " To defend oneself against AIDS is a righteous action. It is a social, familial, and personal necessity. But this cannot be done by closing one's eyes to the moral and spiritual aspects of the situation and by confining oneself to preventive treatment. "[5] One cannot encourage sexual intercourse, using prophylactics as protection, when one knows that such intercourse is a bearer of death or brings the grave risk of death. Such a strategy is an evil precisely because it does not in the least constitute a method which is open to life, love and a better future.

A consideration of AIDS in relation to man as an object and subject of the disease opens up a discussion on 'humanizing' health policy — a discussion directed towards an increasing promotion of life, and of the idea that the significance of sexuality lies in its being an expression of a unitive and fruitful love between two people. AIDS requires an answer which goes well beyond research into the prevention of the transmission of the virus and checking its spread, however praiseworthy that may be. There is a need for a commitment which is inspired by and directed towards the creation of a culture or civilization which conform to human dignity

This reflection on AIDS and man places modern people, and especially the Church and the State, face to face with a turning point. Even supposing



that in the future AIDS will be a curable disease, such a cure of the effect will not have touched its deepest and truest causes at all. AIDS is one of the symptoms of a society which is gravely ill. It clearly implies, therefore, a social and cultural dimension. " We are confronted with a disease that involves our society and our culture. A truly social, and therefore cultural, interpretation is urgently required so that the moral that is drawn is not confined to an individualistic interpretation of the phenomenon of AIDS. This is an essential and decisive aspect. "[6]

During this conference it has already been authoritatively observed by Professor Cottier that AIDS is indubitably the fruit and the sign of a way of life that has questioned, put into difficulty, and negated certain fundamental human values—values which at the same time are moral and religious. I am not here to repeat this essential reading of the signs of the times; I am concerned to emphasize the common task of the Church and the State in relation to man as a way in their fight against AIDS.

Man as Way for the Church

" Man, in the full truth of his existence, of his personal being and also of his community and social being... is the primary route that the Church must take in the fulfillment of her mission: *he is the primary and fundamental way for the Church,* the way traced out by Christ himself, the way that leads invariably through the mystery of the Incarnation and the Redemption. "[7]

With this thought, which is full of meanings both for the Church and for man, John Paul II has invented the expression: man as the way for the Church. The reason for this man-way relationship of the Church is to be sought and found in the relationship between Christ and man. The Church 'cannot abandon man, for his destiny — that is to say, his election, his calling, birth and death, salvation or perdition — are so closely and unbreakably linked with Christ.' Indeed, it is Christ's care and concern for man which obliges the Church to share the same binding solicitude. " Out of regard for Christ and in view of the mystery that constitutes the Church's own life, the Church cannot remain indifferent to whatever serves man's true welfare, any more than she can remain indifferent to what threatens it. "[8] The solicitude of Christ for man — and, therefore, also of the Church for man — consists in ensuring that the life of the world corresponds more to the surpassing dignity of man in all its aspects so as to make that life ever more human.

To give effect to his solicitude Christ travelled the road of union. He did this, as Vatican II teaches, because " by his Incarnation the Son of God in a certain way *united himself* with *each man*. "[9] If, therefore, the Church participates in the same solicitude, she cannot fail to recognise her fundamental task in the continual realisation and renewal of such union. This is why the Church wishes nothing else than to serve this end: " That each person may be able to find Christ, in order that Christ may walk with each person the path of life, with the power of the truth about man and the world that is contained in the mystery of the Incarnation and the Redemption and with the power of the love that is radiated by that truth. "[10]

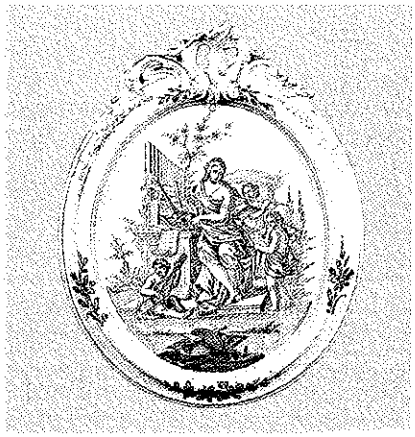
The Church's service to man lies in leading him to find Christ so that Christ himself can walk with him down the path of life — the path of truth and love. The Church has the task of leading man to walk this way of Christ; and *since Christ is the way for the Church*, because he leads to the Father and leads to man, *every man is the way for the Church*, because she must lead him to Christ. This is because Christ, who died and was raised up for all, always provides light and strength to man — to each and every man — to measure up to his supreme calling.[11]

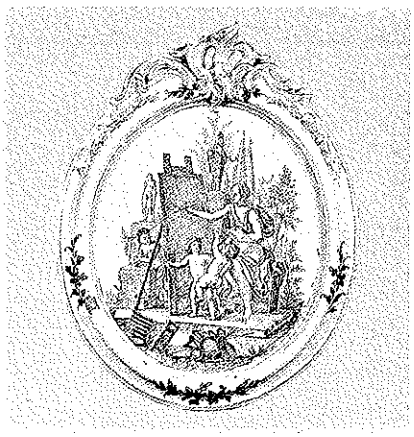
By virtue of this mission of hers towards man, " the Church of today must be aware in an always new manner of man's situation... of the threats to man, and of all that seems to oppose the endeavour to make 'human life ever more human', and make every element of this life correspond to man's true dignity. "[12]

The Church, whose way is man, has been made aware of the threatening situation of AIDS and she has also been made aware of efforts made in its regard: some of these are clearly contrary to the attempt to make hu-



man life ever more human and to make it correspond to the true dignity of man. However, rather than wanting to condemn or to moralise, the Church wants to show man the way to be followed, the way of Christ, the way of truth and love. To say that man is the way for the Church is to say, therefore, that the dignity of human life is her objective; and this means that her mission has no other purpose than to serve man so that he can develop to the full. In general, such a service allows man to refind himself by refinding Christ and by " accepting the superior values of love, friendship, prayer and contemplation. "[13] Man is the way for the Church because the Church strives to achieve a transition from less human to more human conditions for each and every person. The Church's intervention in the field of AIDS has the complete vision of the human person as her guide. That is to say, first and foremost she lays stress upon the sense of responsibility of the individual himself, without excluding in the least the efforts made in the spheres of hygiene and health. And given that AIDS is a disease that is generally transmitted as a consequence of disordered sexual behaviour, it is obvious that the Church expounds the meaning of human sexuality and of marital fidelity. One is not dealing here, therefore, with a nostalgic return to better times of the past, but with making the true and ever-present human and humanizing values understood. The man afflicted by AIDS is not, therefore, a way for the Church because he has AIDS but because he is a man. For this reason, the help that she offers is principally and substantially of an axiological character which seeks to go to the root of every affliction, including that of AIDS. In this sense we read in the *Osservatore Romano*: " The moral teaching of the Church is not primarily aimed at the health of the body. It is aimed, however, at giving guidance to the true gift of self in the light of truth and freedom. Moral evil, in fact, is the evil that inserts itself into the spiritual faculties of man and not into his body. It is not the diffusion of AIDS that tells the Church that there is a mistaken practice of sexuality which has gone mad. Nor will the Church cease to say so when, as everybody wishes, the spread of this disease will come to a halt. "[14]





Here it is emphasized that the Church, precisely because man is her way, must follow and seek to achieve, in ever increasing measure, *the way of civilisation*: the way of truth, freedom and love. The Church will contribute to a solution at root level of this disease of the century with this, her own specific method; and not just this: if men of today accept their being-the-way- of the Church, many other evils will disappear from social and personal life. To who ever asks: but why will it be like that? I reply with John Paul II it is because: " - *Against the background* of the ever increasing historical processes, which seem at the present time to have results especially within the spheres of various systems, ideological concepts of the world, and regimes, *Jesus Christ becomes*, in a way, *newly present*, in spite of all his apparent absences, in spite of all the limitations of the presence and of the institutional activity of the Church. Jesus Christ becomes present with the power of the truth and the love (towards man BH) that are expresed in him with unique, unrepeatable fullness..... "[15]

This new presence of Christ to which the Church leads man, traversing him as her way, will result in man's rediscovering that he is 'wanted' by God, eternally 'chosen' by Him, called, and intended for grace and glory. Man, who is finishing the second millenium, cannot fail to draw the right and responsible theoretical conclusions and practical consequences from this rediscovery of values at the level of being. In fact, by rediscovering, in the dignity of Christ, his own dignity of being as a way for the Church, man will find himself faced with the duty of changing not only his personal but also his social situation. He will then understand that the solutions call for structural changes, and scientific and technological interventions, but he will understand above all that more radical solutions, of a moral and spiritual kind, are required: *entirely human solutions are necessary*.

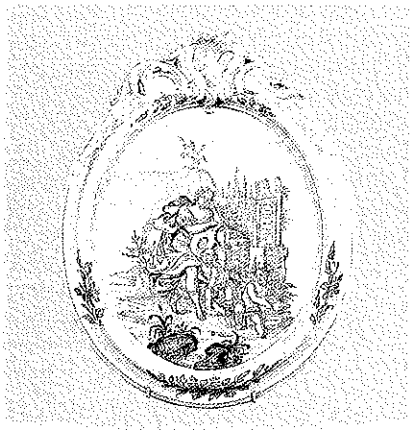
However important the solicitude of the Church with regard to each and every man's task in finding a solution to the challenge of AIDS, it is obvious that the results will be limited without the help of the State. All the more so given that everybody is now convinced that the phenomenon of

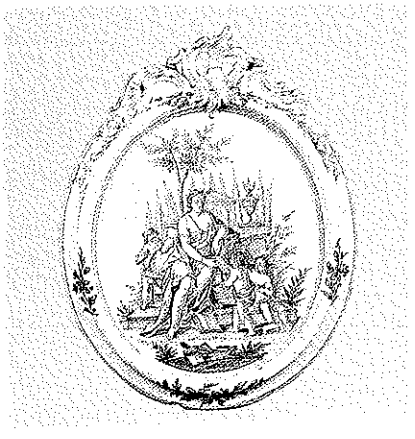
AIDS is really of a social and cultural character. For this reason the response of the State to the disease of our century must centre upon the whole man.

Man as Way for the State

The contemporary State shows itself ever more sensitive to the rights and duties of man. This is demonstrated by the large number of national and international laws and charters. With this solicitude on the part of the state, whereby every citizen should obtain his due and every citizen should also seek to do his duty, the State clearly intends to put itself at the service of man. We can, in this sense, as in the case of the Church, speak of man as the way for the State. Certain measures which have been taken with regard to those afflicted by AIDS sufficiently indicate the extent to which the State intends to guarantee the rights and duties of such people. One need only think of the insistence on the primary duty of doctors to serve those who are ill notwithstanding the danger of contagion. I know that there is a discussion about the possibility of refusing to perform one's professional work in the case of personal risk.[15] I agree, however, with Pellegrino's opinion that there exist at least three reasons " That oblige the doctor not to act for his own interests but to act for the benefit of the patient and which distinguish medicine from the other social services and the other professions ": the nature of the illness, the fact that medical knowledge is not a question of personal property, and the oath to be loyal to the best interests of the patient.[17] An idea of Aristotle's which is to be found in his *The Nicomachean Ethics* is most fitting here: " Let us not deliberate upon the ends but upon the things that concern the ends. Indeed, a doctor does not think about whether he should cure, not does the orator think about whether he should persuade....; on the contrary, after the end has been established, they devote themselves to how and by what means they will be able to achieve it. "[18]

However, a discussion of wider scope is here of relevance because it is by now clear to everybody that the fight against AIDS must mobilise all citizens. The provision of instruments which can involve all citizens, but above all those at risk, has therefore become an urgent task of the State. Now, even if it is the task of the State to practise so-called 'civil tolerance', precisely because there exists, today more than ever before, cultural pluralism, at this moment of a growing state of epidemic created by AIDS the State must ask itself if it should still limit itself to promoting the distribution of prophylactics and clean syringes. Even more so because the real cause of the phenomenon is not fought with such methods but is to be found in the heart of man himself, and in the social forms of the permissive co-habitation of the present day.





This question, which is given added force by the facts of the case, makes the State address itself to man and ask itself questions about its proper duties concerning the education of man and of society. As civil laws do not necessarily have to coincide with the moral laws of the Church, it should be said immediately that the task of the State is not the same as that of the Church. A document of the Holy See states this in authoritative fashion: " It is true that civil law cannot cover the entire moral sphere or punish all wrongdoers: nobody asks this of the civil law. It often has to tolerate what is, without doubt, a lesser evil, in order to avoid a greater evil. "[19] However, this does not mean at all that civil laws must not have a 'morality', at least if they want to claim the title *civil* 'law'. In order to really serve the common good, civil laws must have an educational capacity; it is now known, and especially today, that the educational capacity of law depends on the humanising value it expresses.

Upon the moral and therefore civil value of its laws stands or falls the very *raison d'etre* of the State.

Professor Morra expresses a very sound judgement on the cultural and ethical evils of the permissive attitude of the State.

" The distorting effects of such an attitude are not to be found so much in the distribution of prophylactics as in the failure to take a position on those forms of behaviour which have led to the present diffusion of the disease. "[20] It is precisely here that the State is less effective in performing its most important and special duty: rather than *considering man as its way* it considers the disease. There

is no concern to promote the citizen in his human dignity, but there is an attempt to halt the pathological effects of his disordered behaviour.

On the other hand, if the State considered man more as a way which is to be traversed, it would apply itself to conducting a campaign on the value of sexuality in general and marital fidelity in particular. A campaign dedicated to human, moral and religious values would lead citizens to reflect upon the necessity of self-control and the aquisition of responsible self-discipline. The person at risk would come to be helped in a way that does not have recourse to preventive technology but to a personal commitment to improve his mistaken behaviour and to become a good citizen.

In conclusion, if the State realises that it has a duty to consider man as its primary and fundamental way to traverse, not only will the scourge of AIDS disappear from personal and social life, but people and political communities themselves will make a *leap of quality*: they will live a life worthy of the human-person created in the image of God.

* * *

AIDS has led us to concentrate our attention on man in his entirety. The gravity of the phenomenon, which is by now of global dimensions, has made us understand that the root of the evil is to be found above all in the behaviour of man and, more precisely, in disordered behaviour at a moral-sexual level. This has emphasised how great is the responsibility of both the Church and the State. *Man as the way for the Church and the State has* come to be proposed as a way of being able to meet these respective responsibilities. In following this way the Church and the State as well have been able to establish that the true solution to the affliction of the century urgently requires more radical approaches at the level of human and moral values. " Reflection upon values leads to the outlining of moral behaviour which has a positive commitment. The normativeness of values tends in fact to the achievement of good, and only in consequence of this does the norm become a critical judgement with regard to everything that obstructs such achievement: the ethic of values, therefore, implies attitudes which are commited above all to the good to be achieved. "[21]

The *raison d'etre* of the Church and the State lies in helping to realise, and in encouraging, all authentically human values. Precisely because, even if these values cannot be confined to specifically Christian values, they coincide with Christian values because it is in Christ that we come to know not only the true God but also the true man, that is to say, the man who fully corresponds to the plan of God. The Fathers of Vatican II state: " . . only in the mystery of the incarnated Word does the mystery of man find true light. . . Christ . . in revealing the mystery of the Father and his love, also fully reveals man to man. "[22] This is why we have approached the problem of AIDS in relation to man as the way for the Church and the State.

Fr. BONIFACIO HONINGS
Professor of Moral Theology at the Lateran Pontifical University, Rome

[1] *Cf. Documenti,* in AAVV, *L'Aids Sfida alla Solidarietà* ed. Salcom Varese 1988, pp. 146-7
[2] *2. Cf. Ibidem,* pp. 150-1.
[3] NOTA PASTORALE DELL'EPISCOPATO SPAGNOLO, *Pensieri Cristiani sull'Aids,* in AAVV. *L'Aids Sfida* . , pp. 120-1
[4] CARD. G. B. HUME, *Aids. l'Ora d'una Rinascita Morale,* in AAVV, *L'Aids Sfida...,* p. 103.
[5] COMUNICATO DEL CONSIGLIO PERMANENTE DELL'EPISCOPATO FRANCESE in AAVV *L'Aids Sfida...* p. 111.
[6] D. TETTAMANZI, *Problemi Bioetici sull'Aids,* in AAVV, *L'Aids Sfida.*, p.37.
[7] JOHN PAUL II, *Encyclical Letter* 'Redemptor Hominis', n. 14; hereafter *RH*
[8] *RH,* n. 13.
[9] PASTORAL CONSTITUTION ON THE CHURCH IN THE MODERN WORLD 'Gaudium et Spes', n. 22; hereafter *GS*
[10] *RH,* n. 13.
[11] *Cf. GS,* n.10
[12] *RH,* n. 14
[13] PAUL VI, *Encyclical Letter,* 'Populorum Progressio', n. 13.
[14] L'OSSERVATORE ROMANO, 8 February 1987, p. 1.
[15] *RH,* n. 13; my italics
[16] *Cf.* A.G. SPAGNOLO and D. ABENI, *Aids e Rifiuto dell'Intervento Medico,* in AAVV, *L'Aids Sfida.* , pp. 40-3.
[17] E. PELLEGRINO, *Altruism, Self-Interest and Medical Ethics,* cited in AAVV, *L'Aids Sfida...,* pp. 43-45.
[18] ARISTOTLE. *Opere. Etica Nicomachea,* vol 7, Bari, Biblioteca Universale Laterza, 1973, p.57 (III, 112b 12-17).
[19] SCPDF, *Dichiarazione sull'Aborto Procurato,* 18 Nov 1974, n. 20
[20] G. F. MORRA. *Lotta all'Aids: Tecnica e Scienza da sole sono una fragile barriera* in 'Avvenire' 7 Feb. 1987, p.1.
[21] AAVV, *Carta dei Fondamentali Valori Umani,* Ed. Fondazione Internazionale Nova Spes, Rome 1989, p. 13
[22] *GS,* n. 22



AIDS and Social Problems

PROFESSOR JACQUES CROZEMARIE

I strongly believe that this is a very important conference in that it gives us the opportunity to approach AIDS in its globality: medical, human, social. Without doubt this meeting will give us the opportunity to initiate a useful dialogue which is important for the future of all humanity

Professor Bettolo, Exellencies, ladies and gentleman, I would like to contribute to this meeting by giving some scientific elements on the origin of AIDS, its mechanism, its future.

I would like to excuse myself in advance if I repeat, albeit in another way and with different words, the proposals which have already been most excellently set forth by my colleague Professor Gallo.

First of all, the origin of AIDS.

If we take a short step back in the history of AIDS research, we find that in less than 10 years we have been able to identify the disease, first in the USA, to identify its causal agent, which has enabled us to establish prevention policies and also, as Professor Gallo has stated, to set up the beginning of therapeutic treatment.

Yet, in spite of the enormous effort of researchers, and the establishment of prevention tactics, the number of AIDS cases continues to increase, as Dr. Jonathan Mann will tell you later in greater detail. Since AIDS has a long incubation period, between five and ten years, we have to expect an increase in the number of AIDS cases, even though the curves will deflect in developed countries. Unfortunately, it will not become a necessity, the absolute priority of investigators in the field of medical science. And certainly those thousands of men and women working untiringly in the world's most up-to-date laboratories will never have concentrated so much determination, intelligence and intuition as in this fight against AIDS. But, unfortunately, here time is our worst enemy, precisely on account of the nature of this disease, which lies dormant in seropositive subjects, and on account of its modes of transmission. It has become imperative to bear in mind these terrible parameters in a dispassionate but at the same time generous spirit, in view of its fearful social implications. For long years our societies failed to deal with this disease with the rigour and courage required once they had realized the danger of a worldwide epidemic.

Let us not hide behind words. The lack of sufficient responsibility evinced by certain government leaders in charge of the health policies of the various countries was undoubtedly coupled with the refusal of individuals to modify their behaviour in order to avoid contracting or transmitting the disease. The danger implied by unscreened blood transfusions calls the governments to task. The risk of contracting the virus in the course of sexual intercourse holds individuals to blame. How many months were to pass before any real information on the modes of transmission of this virus was available, even in our more modern societies! But, if the governments, their politicians and, in general, the constituted authorities failed to live up to their responsibilities, certain bodies did, however, mobilize to fight against this scourge. I am talking about patients' associations, private organisations supporting research, communities of researchers and municipalities. This is likewise the sense of the mission ARC has set itself, from the time of its Congress in Washington, where, risking — alas! — proving right all too soon, the greatest cancer experts decided to launch an appeal for AIDS prevention. More recently, at Montreal, these same scientists repeated: "At the present time, education and information are the only concrete means available to us." Undoubtedly, as underlined by the Permanent Council of French Bishops, the present epidemic leads each and every one of us to query his or her own behaviour, since society would seem to have accepted too readily and even encouraged casual relationships and the exercise of sexuality dissociated from any real conjugal or parental undertaking. Love and respect for life now require us to give back some meaning to sexuality and to life itself. The generosity and promise contained in this message of hope are without any doubt the guarantee of a more enlightened and better humanity. However, we are still faced with this urgent obligation to deal somehow with the fearful spread of this epidemic. In order to do this, we must consider how to bring about a change in the behaviours which favour the propagation of the disease. We may lay our hopes in a society whose morality and values will allow us to control the risks of AIDS. But these are the facts. And we are forced to accept the fact of the large number of persons at risk. The research unit of my friend, Prof. Valleron from Paris University 7 (Pierre and Marie Curie), in collaboration with the Hope Foundation of Washington, carried out the first survey of comparative evaluation of the behaviours most at risk in the United States, in Great Britain and in France, on the basis of representative samples of 2.500 persons aged 15 to 50 years of age. Prof. Valleron's study shows clearly that about 5% of homosexuals

and 15% of heterosexuals have had more than four different partners in the course of the last five years. 9% of women had practised anal intercourse and 0.6% of the total population had taken drugs intravenously. If, on the basis of these figures, we try to draw up a scale of risk, it may be estimated that 300,000 French citizens run a very high risk and 900,00 a high risk. The same kind of consideration gives 2 million and 5 million persons, respectively, in the United States and 200,000 and 300,000 in Great Britain.

The picture young people have of AIDS is very balanced, and religious problems are neither denied nor exaggerated. On the basis of a survey carried out on young people in their first year at university — aged 18-20 — it was found that they considered that AIDS had become a priority problem of society as a whole since it challenged the previous values concerning interpersonal relations such as love, the couple, and sexuality (58% of students). While only 1.1% thought that AIDS was a priority because society will be unable to face up to the economic problem created. When the young people were asked if the seriousness of the AIDS problem had been exaggerated on religious grounds, only 25% of them answered "yes," while 61% thought that this was not so. However, the place of religion in practical choices should be considered as relative only. When the students were asked to define the nature of the group of persons they habitually met up with and from whom they might quite conceivably contract the disease but also receive support, only 1.4% give this as a group constituted on religious criteria. While 40 times out of 100 the group to which the student belonged was that of other students on the same study course, for 9% it consisted of people practising the same sport, and for 11%, of persons living in the same neighbourhood. So that we should not be surprised if resistance to using a condom was considered as of a religious nature only in 3.8% of cases, while it consisted of feeling ridiculous using such a device in 4.5% of cases and in 27% of cases it was based on the fear of sexual frustration. Of course, other scientific studies had already given the notion of certain social groups whose behaviour had continued to be responsible. But in general the prevention campaigns attempted had been a failure.





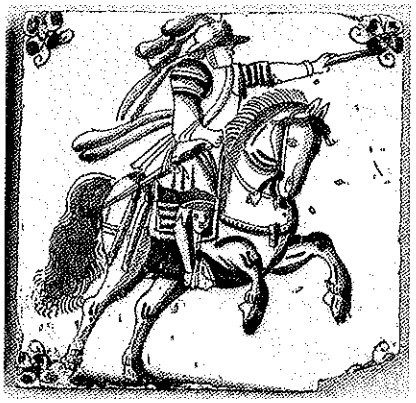
Let us be realistic. The working out of real policies of information on prophylactic and preventive measures constitutes the only weapon our societies possess at the present time to fight, upstream, against the spread of the epidemic. "Don't give death," exhorted Cardinal Lustiger, Archbishop of Paris. May this appeal be taken up by all those men and women who have been unfairly hit by this calamity and who out of ignorance and despair continue to transmit the disease. We should informing and prevent, calling on men and women to reflect on the values which determine their behaviour in interpersonal relations such as love, life of the couple, and sexuality.

The Hope survey indicates that in France about 30% of the population aged 15 to 50 has been singled out. It happens more and more frequently that, when a doctor prescribes a blood test he obligatorily requests the carrying out among others of the AIDS test, though legally in France this requires the patient's authorization. For this reason the percentages given by the Hope survey are in fact minimum percentages, since they are based exclusively on voluntary screenings and not the obligatory screening to which certain patients are subjected. This percentage of voluntary screening rises to 20% in the age range of 20 to 30, and is closely connected with risk. In unmarried persons it amounts to 16%, while it is about 12% for everyone else. For example, in women whose sexual partners are known to be drug addicts, the percentage noted was 33%. In women who admit to having had anal intercourse the percentage is as high as 24%. In people's imaginations AIDS has certain things in common with cancer and especially the fact of being a treacherous disease which is dormant for a long time within the organism and which suddenly reveals its virulence, when it is late, often too late. The aggressor is a virus which demobilizes and paralyzes the defence system of the human organism once it has penetrated it with deadly effect. The weakness of the AIDS virus is that it can only penetrate the organism through blood and sex and, from, this point of view, the AIDS epidemic is different from that of the plague, typhus, or tuberculosis. AIDS cannot be caught from polluted air, water or milk, in the underground, the swimming-pool, at school, at work,

and so on. It can only be contracted following blood transfusions, the use of a dirty syringe, or through sexual intercourse, and, in this way, it is just like syphilis. At the present time, it may be said that 90% of AIDS cases do not show up until three years or more from the time of infection. In fact, it would seem that the hidden life of the disease in persons under twenty years of age is about eight years on the average. In this way, it is similar to a mesotheliom or cancer of the lungs, which affects an asbestos worker after a period of quiescence of 10 to 20 years. This long hidden life of the disease is both a cause of anxiety and a spark of hope because, after all, the seropositive subject may always hope that in the next three or five years an effective treatment will be found, before his trouble develops into fullblown AIDS. These ambiguous hopes, leading to basic considerations on decisive choices, likewise exist in other aspects of AIDS.

Knowing as we do now that a seropositive pregnant woman has two probabilities out of three to see her child, in all cases seropositive at birth, grow up without AIDS, can we systematically advise her to abort? We might be tempted to say no, realizing as we do that having a child is usually the best way for drug-addicted women to get off drugs, but, on the other hand, we might be tempted to say yes if we consider the fact that the child, even if not affected by AIDS himself, will very probably soon be left an orphan.

In this collective fight against the virus, it is urgent to join together, both globally and individually, with a collective new awareness, capable of taking up all the social initiatives which this fight requires and, individually, with a new awareness which enables each one of us to assume his or her own responsibilities in the struggle against the virus. Actions should be undertaken with the participation of everyone in various fields: medical, social, etc. Medical and research activities are now under way; the scientists and doctors are already at the front: they have already done a good job by identifying the virus, establishing its properties and demonstrating its pathogenetic mechanisms. However, they still have to dominate it, preventing it from entering into the organism through use of a vaccine and blocking its further spreading in already infected organisms, by means of effective therapy. Research continues to be carried on. For my part, I have confidence in these researchers and feel sure that, in the years to come, thanks to their admirable dedication and their enthusiasm, thanks to basic technological progress and the spirit of international cooperation and, finally, thanks to the help and encouragement we are all giving, they will succeed in treating this disease and even in preventing its occurrence.





But this may take time and, meanwhile, the other sectors of defence will have to stem the hemorrhage.

Social action implies a whole series of measures, to be taken by the public, political, moral or religious authorities; such measures should be tailored to each community and taken on the basis of its cultural or religious identity, in a spirit of solidarity towards other social groups and of tolerance towards their anti-AIDS initiatives. What can we propose? Allow me to list the fundamental measures I consider useful and general, namely: the absence of any form of social stigma, no discrimination of infected subjects, either at work or at school or in the places where they live their normal daily lives. From this point of view the initiatives taken by the European Community are encouraging. Then there should be a systematic screening of all blood donors even at world level, material assistance and encouragement, but no constriction as a result of the voluntary screening of all those persons who fear they may be at risk. And this may be achieved thanks to diagnostic centres to which access is easy and where the results of tests are strictly confidential, with help in the case of mentally handicapped persons who have lost their sense of responsibility, and, likewise, drug addicts. The fight against AIDS implies, first and foremost, the fight against drugs, especially in Europe and the Americas. And assistance to patients affected by AIDS in hospices and treatment centres. It is important to accompany, to treat, and to comfort these seriously ill persons.

Then there is the question of aid to the Third World, of course, in agreement with the local authorities and ensuring respect of native cultures and traditions. The experience of my journeys to these countries has convinced me that use should be made, for this

aid, of previously existing structures such as centres for the protection of mothers and children, antivenereal dispensaries, advanced medical centres, or even well organised nonmedical facilities, such as those of the various religious congregations. In this context it will be impossible to do everything. So that we should concentrate on the most urgent actions such as the setting up of fixed or mobile blood banks and the education of responsible nurses to ensure the use of sterile syringes or collaborating in the action of the mass media with a view to promoting educational and information programmes on AIDS to meet the varying needs of the different communities.

An example of the effectiveness of this type of action is that of the communities of gays of San Francisco, where it proved possible to defeat an epidemic which was spreading like wildfire by modifying people's habits, thanks to certain rules of hygiene in line with their morality.

It is clear that the Catholic Church, by preaching faithfulness to one's marriage partner, is another example. According to Dr. Coop, former Surgeon General of the United States, couples who have been faithful for the last eight years have nothing to fear from the AIDS epidemic. Since 1985, together with those in charge of the National Institutes of Health in the United States, and the National Institute for Cancer of the United States, we have organised scientific symposia on cancer research and AIDS. These symposia comprised some 80 scientists, chosen for their competence by scientific commissions. Each annual symposium is followed by international co-funding on various programmes of research, since we do not see much use in congresses bringing together five or six thousand participants, which is very costly and, at least so far, would not seem essential in any way for the future of medical research and, above all, for research on cancer and on AIDS.

In fact, I wish to draw the attention of all those present here to the fact that research has need of economic funding and not of mere words, however, impassioned. In addition to all this, on occasion government bodies are set up; however the latter receive funds on the basis of a budget, thus excluding any possibility of funding at short notice any form of programme on research on AIDS, which calls for the immediate action of the bodies in question. Thus in France the body recently set up to deal with AIDS has not even been able to draw up its constitutions as yet.

I am pleased to note that the symposium "To Live: Why?" seems to provide another occasion for reflection; however, I also hope that the considerations made here will be followed up in practical terms. As far as I am concerned, and limiting myself now to the actions of ARC, we have organised symposia, which I just referred to, involving some one hundred scientists in various places: at Dakar, at Fort-de-France, Peking, Washington, and Venice, while in January we will be meeting in Rio. Moreover, since 1982 ARC has been subsidising programmes research on AIDS. Overall, 40 million francs have been invested in various forms, including 3 million francs for Daniel Zagury's laboratory. To these 40 million francs should be added the subsidies granted by ARC for basic research covering various scientific fields such as biochemistry, molecular biology, and genetics. Since 1980 we have spent one billion six hundred million francs on research on cancer and AIDS.



For patients, the fear of being outlawed by society, of losing their jobs or not finding jobs, involves factors which have the effect of retarding society's awareness of certain diseases and its working out of the human and medical instruments capable of dealing with them serenely and generously. The French Council of Bishops recently expressed the wish that the tens of thousands of persons who will be required to support the burden of their seropositivity find support which will enable the latter to discover hope once more. All of you who have had any experience of the hospital universe of services dealing with AIDS and all the various forms of cancer connected with the latter know that these patients, frequently isolated from their families, their jobs, or their civic communities, often find in these doctors and nurses the signs of a comfort, of a human warmth and a solidarity truly worthy of the name. We may only hope that our societies will continue to do themselves credit by treating this type of patient in accordance with his needs. We also hope that they will not encourage the repercussions of exclusion and isolation which all too often hit seropositives and AIDS sufferers.

For it is only by making such efforts, implying a new awareness and which are based on a new morality of behaviour, that we can hope to overcome, with our understanding, what I hope will only be the few short years separating us from the discovery of a treatment. This same Council of Bishops of my country recently appealed to the international organisations asking them to make an effort at solidarity proportionate to the entity of the epidemic. We in charge of scientific organisations, whether State or private, aim at successfully treating 75% of cancer cases, by the year 2000. As the International Chairman of the Coordinating Council for Cancer Research, whose Presidents are Professor Vincent De Vita for the United States and the Italian Professor, my friend Umberto Veronesi for Europe, we are concentrating our special attention on AIDS cases many of

which lead to secondary cancers such as Kaposi's disease, lymphomas, melonomas, cancers of the nervous tissue or cancers of the brain. The elaboration, the perfecting or following up and carrying out of the various measures can only be concretely dealt with in the framework of specialised commissions. And for that reason I am very pleased to note today that the Catholic Church has seen fit to bring together its foremost experts, and I consider it a high honour indeed to take part in these proceedings, which I feel sure will mark the departure point for long-term action of which we will be rightly proud.

I would say that perhaps this marks a historic juncture in the worldwide fight against AIDS, the successful outcome of which will take its place as one of the greatest achievements of Man on Earth, thanks to his intelligence, of course, but also thanks to his sense of solidarity, cornerstone of any society or morality. So let us leave our friends to their work: Arsène Burny to his developing of neutralising antibodies, Prof. Jean-Louis Imbaque at Montpellier to his efforts in the research on antimessengers and the teams of Zagury, Montagnier, Gallo, Bolognesi and Turano, who are working on the perfecting of a vaccine; while we must not forget the research efforts of scientists the world over and, especially those taking part in " To Live: Why? " I would like to in quote Gallo and Turano, as saying that it is easy to talk but it is better to work.

Let us take the example of indulgences or total or partial remissions of punishment thanks to the forgiveness of sin. Are we perhaps faced here with an offence against God, if we consider the proportions of the misfortune hitting the seropositives and the AIDS sufferers? The spirit of accomodation presupposes that, within certain limits, religions should adapt to an exact knowledge of the habits and lifestyles of their times. Let us try and adapt to this sad age of AIDS.

And may the clergy, the religious, and representatives of the Catholic hierarchy find here an expression of the determination and the support of three million members of the Association for Cancer Research, which I have the honour of representing, and which comprises men and women of all confessions and all races. The fight against cancer and AIDS has united them over and above their individual beliefs and opinions. Thank you for your attention

Prof. JACQUES CROZEMARIE
President of the Association for Cancer Research
Villejuif (France)

* This lecture was transcribed from a tape recording without having been reviewed by the author.



The Impact of the AIDS Epidemic on Public Opinion

ROBERT K. GRAY

Your Eminence,
Your Excellencies,
Distinguished Guests

Good Afternoon. It is a high privilege to be in the Eternal City to attend this conference and to associate with the great minds gathered here to address the most difficult — and the most divisive — health crisis of this century.

I especially am honored to address this eminent group of individuals, caretakers of the soul, caretakers of the body, caretakers of the commonweal.

The diverse makeup of this distinguished audience speaks to the moral, medical, social, and spiritual web of the Acquired Immune Deficiency Syndrome that ensnares us all.

I would not presume to add to the wisdom of those speaking before and after me on the medical and spiritual aspects of AIDS.

I bow before the great leaders of the Church who must guide us through the conflicting social and spiritual challenges AIDS presents.

Who would not be impressed that your speakers include men like Robert Gallo? If he had not developed a test to detect the presence of the virus in 1984, there would have been nothing to stop its inexorable course to the general population. Those infected after a tainted blood transfusion would have unknowingly passed it to their partners. Mothers would have passed it to their children. Bob Gallo's genius saved us from a very close call.

I am thankful we confront this modern plague at a time when the advance in scientific process gives us legitimate hope the disease can be stopped. And I am humbled by the knowledge that in this audience likely sit the men and women of science and medicine who will bring to an end the scourge of AIDS.

I must admit such thoughts as these nearly caused me to decline the flattery of this invitation to speak. I have no more than an interested layman's knowledge of medicine or science. My training in theology is only that of a humble and practicing Christian.

But I have studied this subject from my professional perspective and perhaps my views may be helpful on yet another reality about this frightening disease. It is not one which is observable like the medical.

It is not one which is absolute like the moral.

It is not one which is transcendental like the spiritual.

Such skills as I have are communications skills, which I have applied through so many years their span covers the terms of eight United States Presidents and five Popes.

I do not claim communications hold the solution for all problems. But I note the AIDS epidemic now running among sexually active teenagers. In my conversations with you in medicine and science I hear how unlikely the prospects are for quick solutions.

I read the World Health Organization statements that complacency about AIDS is spreading and threatening to undermine current and future efforts to control the disease.

It may be that, for the immediate future, communications skills have the greater potential for saving lives from AIDS and relieving some of the societal pressures on its victims.

For AIDS is both a communicable disease and a disease of communications.

Today, the maladies of aging or heredity are given full public discussion, championed by celebrities, generously funded by private giving and public sources.

But some diseases are less equal than others. For decades mental illness was a forbidden topic. And today there are strong inhibitions to a smooth flow of information in discussing sexually-transmitted diseases.

The even stronger barriers to communications on AIDS are many and include prejudices, taboos, superstitions and fears. Yes, fear; for in a period in history when we profess to have all the answers, those moments when it is obvious we do not are all the more frightening.

In the case of AIDS, there are added communications barriers in the powerful stigma attached by both society and religion to the behaviors most prominently associated with HIV infection.

Yet nearly half the babies born to HIV-infected mothers have the virus. And Central Africa, where millions have the disease, although homosexuality and IV drug use are rare, shows what can happen when AIDS is unleashed on the general population.

In 45 days we will enter the decade of the 90s, a decade when, unless one of you is guided to a cure, the number of AIDS cases — according to the World Health Organization — could reach six million and the number infected with the virus could reach 24 million! And World Health Organization experts believe *that* number may prove far too conservative if transmission of the infection increases drastically in Asia, where the virus has just begun to gain a foothold. Every indication is that it will do exactly that. The HIV infection rate among drug addicts in Bangkok has risen from one percent in 1987 to 40

percent this year. In Southeastern India seven percent of prostitutes have tested HIV positive.

This virus once was restricted to monkeys in Africa. Now all it needs for a delayed-action global explosion is for each infected person to infect another.

Hospitals, research institutions, insurances companies and public health systems will be forced to cope at unfamiliar levels Victims of AIDS and their families will be forced to call up all that is within themselves to maintain hope, courage, and strength.

In the United States, the courts protect the civil rights of those who carry the virus or who have AIDS; hospitals care for those who are sick and dying; and Congress allocates funds for research and information programs aimed at reducing the spread of AIDS and eventually eradicating the virus.

Although these activities seemingly are separate — addressing the legal, medical, and legislative elements of the disease — there is a unifying theme which ties them together. The courts, health care facilities, insurance companies and Congress do not set their own agenda and decide their own policies. The public does, or rather, public opinion does. And if the public is confused, frightened and uninformed, the business of crafting laws justly, of allocating funds prudently and of creating policies wisely becomes difficult, unwieldy — and eventually impossible.

Against the many barriers to conveying the word, how can we wage effective communications against this communicable disease?

What will be our messages?

What will be our methods?

What will be our tools?

Who will be our spokesmen?

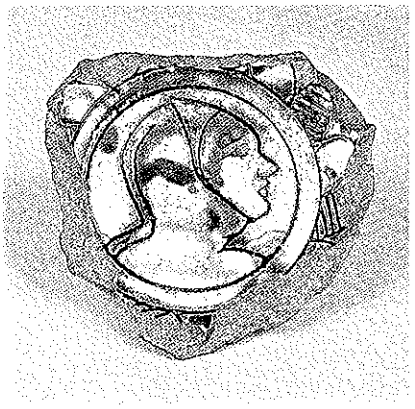
What is the depth of the information void we must fill?

You who have for so long been so consumed with the knowledge of AIDS must find incredible the low level of public intelligence on this subject, a subject which has found its way with a crescendo into all electronic and print media.

A private survey conducted for the White House revealed some astounding results.

When asked how much they know about AIDS, 35 percent checked the category " not much. "

Seventeen percent said AIDS is a punishment God has given homosexuals for the way they live.





Even if health officials assured them there was no danger, 31 percent said they would oppose allowing students with AIDS to attend school with their children.

Seventeen percent of the respondents said AIDS is more contagious than the common cold.

Fourteen percent believe one can contract AIDS from trying on clothes in a department store.

Ten percent think they can catch the disease from handling money.

Eleven percent said they could contract the disease by working with someone who has the AIDS virus. Five percent believe they can catch the disease by being in the same room with an AIDS patient, and four percent believe they can become infected from living next to a hospital or near the home of an AIDS victim.

Statistically, the most discouraging information reveals we may be losing ground. In 1986, the percentage of those who believed they could catch AIDS from shaking hands with an AIDS patient was seven percent, today nine percent hold that view.

With this litany of misbeliefs about the ways AIDS can*not* be contracted, it is little wonder there is such public ignorance about how it *is* transmitted. Statistically, in the United States alone, one more citizen contracts AIDS every ten minutes.

Our greatest losses to AIDS could be the hundreds of thousands of men, women, and children who at this moment are not yet contaminated but will become so, in part because of ignorance.

How can communications help them? Public opinion is a fluid, fickle, irresolute creature. If it does not have direction, guidance, signals, it becomes unyielding, aimless and disordered.

Publics — and the public opinions which motivate them — need informed, enlightened direction to move them to positive actions and to the demands for support of those actions by other publics and governments.

There are three mighty voices which should be brought to full strength if we are effectively to educate publics, help them prioritize their thinking and their calls for action.

One voice is the voice of the world business community. Good advertising educates. Last year, in the United

States alone, American business spent 109 billion in advertisements aimed at educating publics about products.

The newspapers, television and radio stations which carry these message are total in their coverage. It is in large part this power we salute when we call this The Communications Age.

In addition to their corporate consciences and societal interests, both the world business community and the communications systems which deliver its messages have strong motivations for involvement in the massive education task before us.

In the U.S. the current annual cost of AIDS care has risen to an estimated $ 100,000 per patient. These costs are reflected directly back to companies through escalating costs of the health care programs mandated for business and in the local, state and federal programs supported by corporate tax dollars.

Major advertisers and the captains of major communications systems need to receive individual attention. They must know the importance of the role they can play in conveying the message.

They must hear the urgency of the need for their doing so.

Another of those mighty voices which should be brought to full decibel is the voice of the world governments. AIDS knows no boundaries. It touches all humanity. If the disease is not halted, more lives could be lost than in all of mankind's past wars.

Also at serious risk are the fragile economies of the developing world and centuries of painful progress around the globe.

So much is at stake, yet when the seven industrial nations met in Paris last July, the topic of AIDS was not even on the agenda.

The mighty seven meet again next summer. At this meeting, the leaders of those nations with the most expansive economies should be called upon to take collective and cooperative action with a new level of intensity, a new and urgent priority on the scientific push toward improved treatment, a safe vaccine, an ultimate cure.

The actions of governments can establish national priorities and communicate seriousness and urgency. To communicate a resolve to end AIDS, here are but a few of the actions governments should take:

Border barriers and regulatory barriers to scientific sharing should be lowered or eliminated.





Bureaucracy should be lifted from the approval mechanisms.

New systems should be established to test more drugs more quickly. Already there are more than 100 drugs awaiting clinical trials. The last one tested could hold the answer. Researchers should be provided with state-of-the-art equipment and biohazard protection.

Glacial processing procedures should be streamlined in the regulatory agencies.

Funding should be increased as fast as those funds can be wisely used. Today's governments are keeping their cost-benefit calculations for funding by comparing the number with AIDS to those with cancer and heart disease. Cost-benefit calculations should be based on the number who will be afflicted in ten or 20 years, given current trends.

Foreign aid funds must be found — and private giving stimulated — to provide treatment in third-world nations, where the cost of one patient's yearly supply of AZT can be more than the average annual income.

To incur these costs, to change or make exceptions to regulations, to eliminate bureaucracies, and to increase sharing, the governments of the industrialized nations will need the approval of their legislative bodies and of the citizens who select them. This will present a formidable communications challenge.

But the leadership of nations have mighty megaphones to carry their messages. And when they are used to educate and lead the people they serve, those messages seldom fail.

With AIDS, where there are ethical and spiritual questions abounding, there also is a great need for the voice of moral persuasion and authority to guide, to convince, and to calm. It is for these reasons I believe the third and most potent of the three voices can be the Church, which at this moment may make the most important of all contributions to combat AIDS.

For without focused, coherent, and mature public support for those who have AIDS; without beneficial and wise programs for those at risk; and without realistic information campaigns to help stop the contamination, the public debate can decay into a cacophony of sexual politics and

false mythologies perpetuated by mean-spirited groups with a macabre view of the human condition

Without an underlying message of hope and redemption, without a loud, realistic and unequivocal message of forgiveness and understanding, and without Church programs for AIDS patients which offer clear evidence of the Church's commitment to the sick and dying, public opinion could continue to be a confused mass. A quarter of the United States population, a group exceeding 50 million, is Roman Catholic. Again, according to those ubiquitous polls, more than twice this number say they look to the Holy See for guidance and illumination.

In France, Zaire, Zambia, and Uganda — a few of the other countries most affected by AIDS — a substantial part of the population is Catholic.

The Church is controlled by no government. It has no political body to which it is answerable.

It has no tourist revenues to protect. It has a global following of nearly one billion citizens.

No other single institution, political entity or organization so cuts across national boundaries, socio-economic strata, and political systems.

For these reasons, the Church, which has been the epicenter for modern man's struggles, is the logical leader, the logical entity to embark upon a realistic, mature, and modern communications program designed to stop the spread of AIDS, comfort and protect those with the disease, and educate those who have been so bewildered and confounded since its outbreak.

The Church has the moral authority to combat the mythology that AIDS is a direct punishment from God. As the disease spreads, so spread fear and bigotry, and the pulpit of the Catholic Church is the mightiest of weapons against these dark forces.

As I have said, in significant measure, AIDS is a disease of communication. And the Catholic Church, more than any other institution on Earth, is capable of communicating in every county, in every state, in every major city, in every country in the world.

The Holy Father has travelled more than any Pontiff — to nearly 90 countries — and he has brilliantly articulated the message of Christ to the modern world through the modern media.

The message was summed up beautifully by his Holiness at the Mass of the Ascension in Osaka earlier this year. The Church must proclaim a message of hope to those who suffer from AIDS.

The Church can offer a message of hope to those already suffering from AIDS and moral discipline to help prevent its spread.

These messages can be proclaimed loudly enough and often enough to overcome the voices of confusion, fear, and outrage.

The Holy Father, the American Cardinals, and the Bishops of America have one of the highest credibility ratings of any of the major public leaders in the United States. I am certain the ratings are similarly high in all nations.

The Church has that extremely powerful voice which can affect and shape the international debate on AIDS. It has the resources, the means, and the moral force to make a significant impact on the way public opinion about AIDS is formed.

I do not suggest the Church donate its rich store of values. What the Church can do is to add a dimension of calm and compassion to the debate, be a heavy influence on those who make public opinion, and assist in the formulation of wise policies aimed at eradicating AIDS ignorance and all its ugliness.

In addition, the Church has extraordinary persuasive potential on influential citizens who direct major corporations and world governments, the other two of the three major voices we must activate.

A Washington friend is waging war on the disease with a lapel button which reads, "Heal AIDS with Love." My first reaction was, "How naive, how very desperate" But now I think, "How wise, how very wise."

For we will win this war against this devastating disease of the body and the destructive diseases of fear, prejudice, and ignorance which add to the suffering.

We will win it whith the love of the Word of which you men of the cloth are the custodians.

We will win it with the love of wisdom and compassion which drives you men and women of science and medicine.

We will win it with the greatest of all powers, with the love of God.

ROBERT K. GRAY
National Conference on AIDS



Introductory Remarks

Professor ALESSANDRO BERETTA ANGUISSOLA

I am very grateful to His Excellency Mons. Angelini for entrusting me with the honourable task of chairing this session of the conference, in which people of the very highest prestige will take part.

I have been a member of the Italian Commission for the Fight Against AIDS from its foundation. I have therefore been able to follow the evolution of the AIDS emergency in our country at close hand, not only at a strictly medical and health care level, but also in its numerous other aspects: ethical, legal, social, etc. The advances made by our epidemiological, pathogenetic, and clinical knowledge have been notable: they have been described during these past days, with the voices, indeed, of those who carried out the research. But a treatment which will lead to a cure is still lacking, a vaccine is still not available. The fight, therefore, is concentrated above all else on prevention, and this in turn is almost exclusively based on correct and widely spread information.

And here, it seems to me, there has intervened the most significant cultural evolution. Information, nearly everywhere, started badly, indeed extremely badly. For example, communication through the mass-media was too often done under the banner of psychological terrorism; AIDS became the plague of the century, those afflicted had to be sent to new quarantine stations; those who were seropositive were to be kept far from places of work and schools.

During these years it was understood that fear was more than ever a bad counsellor, and that it was better to replace it with the birth and the prevalence of solidarity.

The National Health Plan of 1989-1991 has accepted this fundamental concept, which for its part draws inspiration from the precepts of the World Health Organisation.

Solidarity is not only a profound moral duty but also an objective necessity in resisting the diffusion of AIDS.

If those who are afflicted by AIDS are made outcasts, if those who are seropositive are treated as plague-spreaders, and those involved in care are left alone, this will result in a concealment of those who are ill with AIDS or are seropositive.



Prevention, which is the principal form by which AIDS is combatted, will in this state of things be actually impeded. The real conquest of these years has been the concept of solidarity: we have learnt that while waiting for effective medicines we must get used to AIDS, as has been done with other widely diffused diseases.

This session, which concludes this international meeting, contributes valuable pieces to what is a magnificent mosaic—this conference. And it bears the mark of what has characterized this conference. Dedicated to the study of very complicated problems which do concern not only the physical health of man but man in his entirety, it has conducted its work under the banner of interdisciplinary participation - not only in the field of the experimental sciences of medicine and biology, but also in that of the moral and humanistic sciences. From this comes a unique slant which provides a full answer to that dramatic question which constitutes the title of this conference: 'To Live: Why? ' This last session, as well, is therefore composite in character: it teaches us about the thought of the Church, it keeps us up to date on the state of research in the European Community, it informs us about legislation regarding AIDS in various countries, and it ends with a most authoritative appeal for united action by States in the fight against AIDS.

In such a way does this session, as well, take effective part in the drawing up a proposal for action, which is the basic aim of this conference.

Professor ALESSANDRO BERETTA ANGUISSOLA
President of the Italian Superior Council of Health

AIDS and Its Prevention: A Greek Orthodox Perspective

✠ *ATHENAGORAS ZACOPOULOS*

AIDS is a new disease which was first recognized in 1981 and has been reported in 127 countries. The World Health Organization estimates that by 1991 there will be between 50 and 100 million people worldwide infected with the Human Immunodeficency Virus, HIV. This is a conservative estimate, in that it assumes Asia and Latin America will not be badly affected. It is now thought that the majority of these 50 to 100 million will develop AIDS. The numbers infected will continue to rise, doubling every six to twelve months. So by the late 1990s the situation may be much worse even than this WHO estimate suggests.[1]

In September 1986 *The Times* of London gave us a warning:

" From the speed with which the Acquired Immune Deficiency Sindrome (AIDS) virus is spreading through Africa, America, and Europe, it is clear that mankind is on the threshold of a viral catastrophe. Unless doctors and scientists reappraise their approach, its impact on man within twenty years cannot fail to match that of the Black Death in the fourteenth century, and the world wars of this century. "

The WHO's terrifying estimate and the London *Times'* grim warning tell us that AIDS is a global, life-threatening, and lethal epidemic. It is the worst health problem in the world today, even far worse than cancer.

Groups that have been infected are worldwide: the homosexuals and bisexuals, the intravenous drug users, the haemophiliacs, the recipients of blood and blood products, heterosexuals, infants, and children born to infected mothers and other groups.

Much has been done in research, and a great deal has already been learned about the cause, the nature, the epidemiology, the clinical manifestations, and the spread of AIDS.

No vaccine has yet been produced, and there is no known cure up to now.

Having made these introductory remarks, I should like first very briefly to refer to the AIDS cases in Greece and secondly to say something about the prevention of AIDS from a Greek Orthodox point of view.

A. Two hundred twenty-six (226) AIDS cases have recently been reported by the Ministry of Health Care and Social Welfare. The number of cases in each of the high-risk groups up to June 1989 is shown in the following table.

AIDS PATIENT GROUP IN GREECE - JUNE 1989

Patient groups	Men	Women	Total
Homosexual-bisexual	113	—	113
Intravenous drug abusers	7	1	8
Homosexual and drug abusers	1	0	1
Recipients of blood	—	—	—
And blood products (23+16)	35	4	39
Heterosexuals	40	8	48
Babies and children	5	4	9
Undetermined	7	1	8
Total	208	18	226

Ninety-one (91) AIDS patients out of the total of two hundred twenty-six (226) died.

The Church of Greece, like any other Christian Church, following our own Lords Jesus Christ's example. He " went about all the cities and villages, teaching the gospel of the kingdom, and healing every disease and infirmity. When he saw the crowds, he had compassion for them, because they were harassed and helpless, like sheep without a shepherd "[2]), has responded to the infected and non-infected with understanding, love, and compassion. That same Church has organized conferences, lectures, round-table discussions, discussion groups in Parishes, Schools, and Universities. She has visited AIDS patients in the Hospitals and in their homes. She has responded to their partcular needs: financial, emotional, psychological, social, and spiritual. She has prayed and worshipped together with them.

B. In the second part of my talk I should like to make a few comments on some rather practical issues concerning the prevention of AIDS.

1. " Safe sex " or chastity and fidelity?

The main channels of the transmission of HIV-AIDS are through (1)

sexual intercourse: homosexual, Heterosexual from men to women and from women to men, (2) blood transfusions or blood products, (3) sharing contaminated needles and syringes amongst intravenous drug users and through infected mothers. It is estimated that approximately 50% of infants born to HIV-AIDS mothers are infected. Here I would like to add another serious dilemma that surrounds AIDS, with reference to organ transplantation, in vitro fertilization and embryo transfer (est tube babies, surrogate mothers, embryo banks, frozen human embryos, adopting embryos), other forms of procreation (cell fusion, cloning, The cloning of man, asexual production), genetic engineering (intervention) (gene-splicing, recombinant DNA, gene transplants, gene therapy) Regarding in vitro fertilization, I single out a case concerning the surrogate motherhood. " In the USA surrogate mothering is allowed, and in the preparation of the artificial insemination procedure the semen donor is screened for HIV, to prevent infection of the surrogate and the baby. A recent case reported in the *New England Journal of medicine* illustrates the complexity, and the tragic outcome of such activity: a 32 year old woman acted as the surrogate mother for her sister. Her brother-in-law screened and was negative She did not reveal that 3 years previously she had been an intravenous drug user, and she was not tested. Five months after artificial insemination, when she was pregnant, her drug history was found out and she was tested and was positive for HIV. Her sister and her husband were not told until the baby was born and found to be HIV positive. The baby was rejected by both the surrogate and her sister and brother-in-law! The authors asked in the article who, then, should bear responsibility for the child? Who indeed? "[3]

Is there an answer to this worldwide threat to public health of proportions unprecedented in modern times? Is there a remedy, a cure? Has a vaccine been developed? Dr J. Bingham concerning vaccine writes: " - Great efforts are being made to produce a vaccine to prevent further people being infected by HIV. Although some prototypes are presently being tested, it is going to be very difficult to produce a vaccine, as the antigenic structure of the virus is constantly changing in a similar way to the influenza virus. Thus the prospects for a vaccine in the near future seem poor. "[4] There is neither a cure nor a vaccine that works. In the absence of a vaccine, effective treatment or cure, most governments have programmes of some kind to combat AIDS and urge different methods of contraception, preventive measures, for " safe sex. " The Church's response to the preventive devices and practices, to " safer sex ", is the age-old, time-honoured, and unchanged teaching that the safest, the most effective contraceptive, the most effective measure is chastity before marriage and fidelity within marriage. Abstinence outside of marriage and fidelity within marriage represent the only sure basis of prevention. One person, one marriage partner for life, this life-long monogamous union of husband and wife is the best safeguard against the potential danger of AIDS.



2. Family as an antidote to AIDS

Aldous Huxley, in his famous book *Brave New World*, makes a frightening prediction about the future and portrays a world where everyone would have every possible material possession and every possible freedom to behave as he pleases. Families will not exist: people will be grown in bottles, and that cherished word, " Mother, " could never be mentioned or used without punishment. The message of the book is that for society to be controlled, the family must be abolished. Obviously this is imaginary, a utopia, and could never happen, because the family is the very basis, the very foundation of the fabric of society. It is my firm belief, that the family, as the most fundamental human unit, can be the most effective antidote to AIDS.

Christianity rightly considers the family to be of immense importance. The family plays a great role in the physical and psychological welfare of family members and especially its children. One of the main functions of the family is socialization. The first few years of a child's life are spent almost entirely within the family, where the foundations of personality are laid before he or she begins to encounter other influences. All the ba-

sic perspectives, Christian values, and norms are presented in this intimate atmosphere. Parents should guide their children to that stage to which the children can be led by the Holy Spirit to make a personal commitment to Christ, Our Lord. A good, stable, Christian home helps children and youngsters in general to grow into happy, affectionate, well-adjusted, mature, responsible, secure, self-confident, and free individuals. The family assists young people to develop, along with other factors, their personality, and to become creative, productive, and responsible members of society. A Christian family produces God-fearing people and dedicated members of the Church.

On the contrary, " the current large-scale marital instability is producing a vicious circle, for in turn the wounded children of such marriages are the potential alcoholics, drug addicts, disordered personalities, young offenders, and sexual deviants of the future. The AIDS crisis must make us look more deeply at the instability of family life in the West. "[5]

This is reflected in the American Government's official publication, *Social Trends*. In 1972 only 8% of children lived in single-parent families; in 1985 13%. In 1986, there were 158,000 illegitimate births, compared with 61,000 in 1976. In 1986 more than 30% of marriages were second ones.[6]

3. The Church's involvement

The world community faces a great disaster of unparalleled magnitude in the AIDS illness. And, as in all disasters, the Church has a vital role to play:

1. The Christian Church must develop educational and other various programmes to prevent the spread of the disease. The Church should inform the Community about the disease through conferences, lectures, group discussions, in schools, in Churches, in Colleges and Universities. The Church should became involved in the national and international discussion via the mass media. She must publish relevant materials.

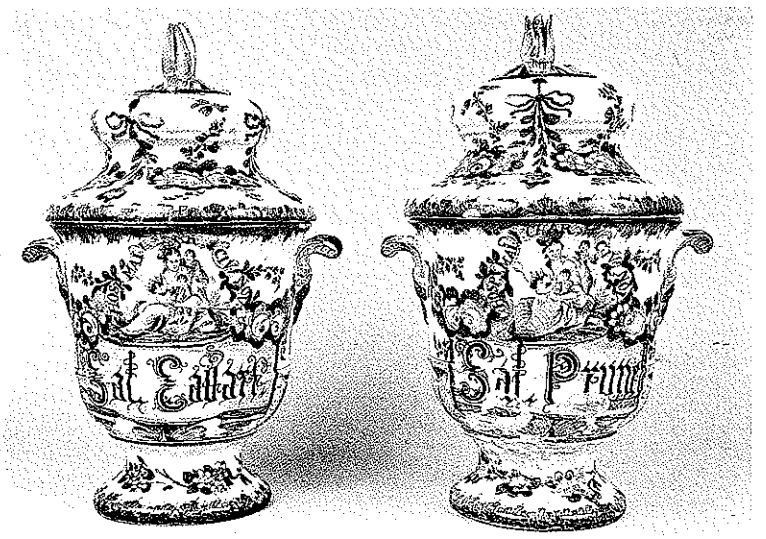
2. Our Lord said, " I was sick and you visited me, " " Be compassionate as your Father is compassionate, " and " If they are sad, share their sorrow. "[9]

With the above words Christ wants us to be understanding, loving, and compassionate to the AIDS sufferers who feel frustrated, depressed, isolated by their family, friends and by an indifferent and hostile society. " The Church has a definite function of advocacy on behalf of all sufferers... against any form of discrimination in connection with health, social and home-care needs, housing, accomodation, employment security, pensions, mortgages, and long-term loans. "[10]

Perhaps I may best close my talk with Christ's words to the lawyer in the parable of the Good Samaritan: " Go and do the same yorself. "[11] Let us go ourselves and meet with compassion and Christian love our brothers, the AIDS sufferers.

H.E. Msgr. ATHENAGORAS ZACOPOULOS
Orthodox Metropolitan of Fokkis, Greece

[1] *Dr. C. COLLIER, The 20th Century Plague*, Iring. England, 1987, p 19
[2] Mt. 9. 35-36
[3] *Ethics and Medicine*, Editorial, 1988 4.1, pp. 1-2.
[4] " HIV, AIDS and ARC: The Virus and the Disease ", in *AIDS, Meeting the Community Challenge*, ed. V. Cosstick, St Paul Publications, Middlegreen, Slough, England, 1987, p. 18.
[5] J. DOMINIAN, " *AIDS, and Morality* ", *AIDS Meeting the Community Challenge*, ed by V. Costick, England, 1987, p.74
[6] *Ethics and Medicine*, ibid, 1988, 4 1, p. 2
[7] Mt 25.36
[8] Lk 6 36
[9] Rom. 12.15
[10] B. KIRKPATRICK *AIDS, sharing the pain*, London, 1988, p 98
[11] Lk 10 37



The European Community Program for AIDS Research

PROFESSOR ANDRÉ EMMANUEL BAERT
PROFESSOR PAOLO MARIA FASELLA

I. Background

In September 1983 the Commission of the EC (European Community) organized a first consultative meeting on the then new problem, AIDS. It is this group which later came to be called the EC Working Party on AIDS Research (Annex 1: list of members). A coherent programme proposal of concerted action and cooperation between major national research centres was enthusiastically formulated; it was unanimously adopted by the CGC on Medical and Health Research at the beginning of 1984 and submitted to the decision-making bodies.

On the initiative of the European Parliament, preparatory activities were conducted using a contingency budget of half a million ECU; these activities included a series of workshops, seminars, and publications, and also emergency support for some centralized services.

At that time the taboo effect surrounding the disease of AIDS - then linked exclusively with promiscuous homosexual practices—was enormous, and public reactions were rather emotional, causing delays in program approval. On 17 November 1987 the Council finally adopted it, with an indicative budget of no less than 14 million ECU for five years, as a new research target within the fourth Medical and Health Research Programme (1987-1991).

II. AIDS research policy and strategy

The AIDS research programme fits within the overall *R&D* policy of the *EC*, which has its legal basis under the Single European Act. It is implemented according to the " concerted action " method and has the following characteristics and aims:

— complementarity to national efforts
— strengthening of national efforts
— a directed programme
— transparency
— non bureaucratic implementation.

To be complementary to national efforts means that the Community input should not substitute for national efforts but be complementary to them. Though cooperation and concerted action in an effective and efficient way a critical mass be reached in order to achieve results which could not take place at national level alone.

The total must be more than merely the sum of the different parts; in other words, there must be a Community value added. If the research can be carried out better at a local or national level, it should not be brought up at Community level.

National efforts can be strengthened by EC research exploiting differences between individual national activities and so learning from them, as well as by making use of unique national research services or facilities which are selected as being of use to all relevant activities in other Member States. These centralized facilities provide services and assistance to all scientists from universities and research bodies as well as from industry.

The EC Medical and Health Research Programme does *not* fund grants for individual research projects on a competitive basis, as is usually the case with national programmes. It is a coordination programme bringing networks of cooperating centres together at Community level in order to reach scientific goals which are regarded as socially relevant by the Council and the European Parliament.

At all levels of management, from planning, programming, and implementation to evaluation, experts indicated by the Member States are fully concerned. Every five years a panel composed of independent evaluators, not involved in any stage of the programme, makes a scientific evaluation of the programme implementation and this is reported to the Council, the European Parliament, and the Commission.

In order to promote self-reliance and responsibility and to minimize bureaucracy at all stages of implementation, the management of the concerted actions is decentralized to project leaders, selected and proposed by the cooperating centres themselves.

A selected project leader receives a multiannual contract from the Commission, covering six instruments within the limits of the budget of the concerted action:

1) a central 'desk', with secretarial support and telecommunications facilities;
2) the project leader can travel to any cooperating centre at any time;
3) he can organize meetings, workshops, seminars, congresses, etc. at any time and anywhere in the EC;
4) staff can be exchanged between cooperating institutes;
5) data, reference materials, costly instruments, etc. can be exchanged;
6) joint publications in *outlets* chosen by the steering group (journals or books).

The handling of the budget is entirely the responsibility of the project leader. Control is exercised *post hoc* at different levels:

— his national institute,
— peer review by the steering group,
— financial control by the Commission.

III. Programme content

The EC AIDS research programme is divided into four different areas, each steered by its own PMG (programme management group), summarized in Annex 2.

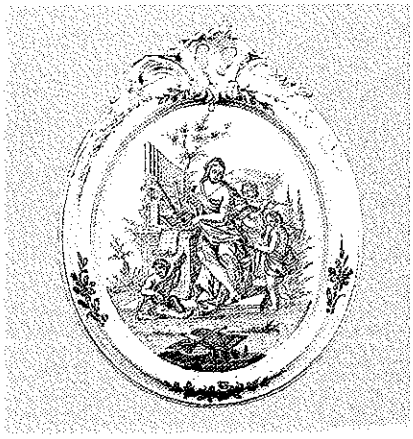
1. AIDS disease control and prevention

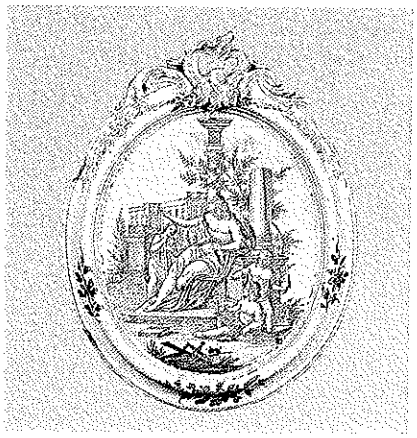
a) Centralized Facility

Since the beginning of the AIDS epidemic, the European Centre in Paris established by the French Government, with the continuous support of the EC and the active cooperation of epidemiologists from all Member States, has been able to:
— collect, analyse, and distribute epidemiological data on AIDS and HIV infection in the EC;
— collect data on individual AIDS cases, which is necessary for in-depth analysis (started in 1989);
— establish a European database on HIV prevalence;
— provide for the EC and its Member States projections and short-term predictions of the numbers of AIDS cases;
— serve as a European forum to inform Member States about new epidemiological developments and to exchange observations and proposals related to the containment of the epidemic.

The centre has been instrumental in launching ongoing critical reviews and guidance for concerted actions.The data collected and analysed by the Centre are published in quarterly reports; these are an essential part of the basis on which public health decisions are taken in Member States. Reports and analyses by the Centre have been published regularly in scientific journals and presented at numerous meetings and congresses.

The Centre has been acknowledged by the World Health Organization as the Collaborating Centre specifically responsible for the surveillance of AIDS and HIV in the WHO European Region. The activities of the Centre are presently limited by the funds and the human resources available.





b) Concerted Actions

Five concerted actions are in progress, two others have recently started, and two are *pending* formal approval. These concerted actions involve research groups from all Member States and other COST countries. 'COST' is *a framework and forum* for European research co-operation (= co-operation in science and technology). The EC Member States are joined within it by Austria, Finland, Norway, Sweden, Switzerland, Turkey, and Yugoslavia; to date, the first five of these have chosen to participate in the AIDS target of the parent programme, providing a welcome and valued increase in the geographic area covered by this particular EC activity.

The project leaders regularly present the results of the projects to the Epidemiology of AIDS PMG. The multicentre approach used has proved to be both feasible and successful, as illustrated by publications in important international journals.

The five ongoing projects are described briefly below:

Heterosexual transmission

This project tries to answer the question: how frequently is HIV transmitted during heterosexual contacts and what factors influence transmission? Eleven centres from nine European countries take part in this project, which is one of the largest of its kind. Sexually transmitted diseases, advanced clinical status, anal intercourse, and intercourse during menses were found to increase the risk of transmission.

Mother-to-child transmission

By the end of September 1989, 442 children (224 boys and 218 girls) born to HIV positive mothers have been enrolled from 10 European centres. Although there has been an increase in the number of cases in every centre, the majority of new cases come from Italy and Spain. 169 of these children have been seen at the age of 18 months or over.

Of the entire cohort 442 children

63 are presumed infected because of the development of AIDS/ARC, with a persistent antibody over the age of 18 months, or after at least 1 positive virus or antigen test.

210 children have lost antibody, have not had a positive virus culture or positive antigen test, and are presumed not infected.

169 children have not had a positive virus culture or antigen test, are still antibody positive, but younger than 18 months, and therefore their infection status is indeterminate.

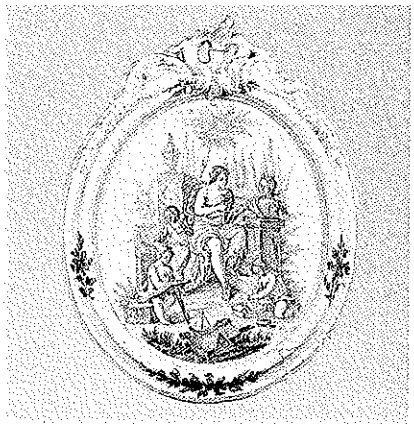
By only including those children who were aged 18 months or over the best estimate of the rate of transmission of HIV infection from a seropositive mother to her child is 23%

The analysis of the natural history data should help identify precursors of AIDS/ARC onset, and the selection at an early age of those children who may benefit from possible theraphy.



Intravenous drug users

IV drug users form the fastest-growing risk group for AIDS in the EC. In addition, they represent the most important source of infection for heterosexual transmission and for transmission from mother to child. Thirteen centres belonging to the EC and COST countries conducted between December 1988 and March 1989 a pilot phase to evaluate the efficacy of measures to prevent drug use and HIV transmission.The pilot phase demonstrated the feasibility of the concerted action, although extremely difficult, and the main phase will start at the beginning of 1990.



Assessment of preventive strategies

Preventive measures have been developed and are being implemented in all Member States. Surveys show that these programmes result in an increased awareness of and knowledge about AIDS, HIV transmission and ways to prevent infection. It remains to be determined to what extent behaviour changes, which will limit the spread of HIV, have taken place. This concerted action aims at developing a methodology to assess the impact of preventive measures, e.g. by studying the incidence of sexually transmitted diseases (STDs) as a surrogate marker.

Mathematical modelling

There is a clear need in all countries for forward projections of the epidemic. Such projections are needed for decisions concerning public health, choices of control strategies, and evaluation of the economic impact of the AIDS epidemic. In collaboration with institutes within the EC, the USA, and WHO, this project tries to identify the most appropriate methodologies to answer these questions.

c) Declaration of intent

As a result of the call in 1988 for declarations of intent to take part in the EC programme, new concerted actions have recently been approved. They address previously neglected areas and complement the European research efforts to understand the epidemic better

One concerted action will explore conditions leading to, and the outcome of, needle stick injuries in health care workers. Two concerted actions deal with prostitutes and clients of STD clinics whose behaviour puts them at risk; these groups are assumed to become increasingly important. Another concerted action studies whether basic data can be assembled on sexual behaviour of the general population.

The work developed in the field of epidemiology with the help of the Paris Centre and in the framework of concerted actions has encouraged European collaboration among teams working in the field, enabled exchanges of personnel to take place, and permitted studies which would be impossible in single countries because of the small numbers of suitable subjects available for specific studies.

2. Viro-immunological research

Four Centralized Facilities and 14 concerted action networks have developed within the section on basic research into AIDS.

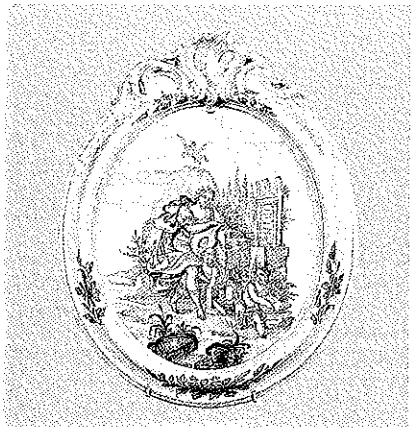
a) Centralized Facilities

1. The development of a titrated SIV and HIV-2 animal model in macaques at the Deutsches Primatenzentrum, Göttingen in collaboration with centres in France, Netherlands, and UK.

2. Within TNO at Rijswijk (NL) a group of chimpanzees has been set aside for EC-supported AIDS research. The first animals are now receiving a possible HIV vaccine in the form of genetically manipulated chimaeric polyviruses which express one of the antigenic sites of HIV

3. The Rega Institute at Leuven (B) has developed a centralized service for anti-retroviral screening. It is screening about 5,000 compounds a year for anti-HIV activity and investigating in depth a small number of potential interest. This service is used by academic and pharmaceutical research groups in the Community and COST countries.

4. As many types of research, from epidemiology and clinical research, to antiviral and vaccine development, need to determine the sequence of the viral genome, an EC Centralized Facility is being set up in Frankfurt at the Georg-Speyer-Haus, with the appropriate skills and equipment.

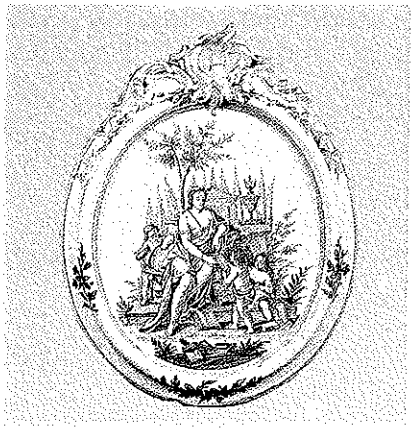


b) Concerted Actions

The following highlights can be mentioned (not in order of priority):

1. Virological studies

Professor Montagnier's laboratory has continued in its leading position in the field of HIV virology and concerted action support has made it possible to pass on methodologies to others. It was the first to describe seronegative infection and the Concerted Action on quantification of HIV infection gives first priority to the standardization of the polymerase chain reaction (PCR) technique for assaying infection.



2. Immunopathology

A network of 116 scientists from 21 centres, previously unrelated, collaborate in the research on the pathobiology of HIV infection more in particular on the macrophage reservoir, the interaction of HIV with the cell membrane, the immuno histopathology of HIV infection, the immune abnormalities of infected subjects and the specific B-cell responses to HIV proteins. Such a network permits a global perspective on every individual research project and avoids costly duplications of the research programmes of each group.

3. Immunogenetics of AIDS

This Concerted Action composed of 16 different groups from 13 countries seeks to clarify whether there are immunogenetic markers associated with a predisposition to HIV infection and/or the subsequent development of AIDS. The project has helped to develop and establish new HLA typing methods and has provided new important information on the genetics of the HLA system within the EC. It created contacts between AIDS and HLA workers, who have benefitted from being trained in new methods and discussions with other groups.

Blood samples from about 700 patients and controls have been serologically typed and DNA material has been stored for subsequent analyses.

4. Animal models

Great importance was attached to the study of animal model infections to both understand the disease and evaluate countermeasures. Collabfo-ration is ongoing on the feline immunodeficiency virus. Priority has been given to SIV in monkeys. After exploratory studies in several primate centres a Concerted Action was set up which has selected a suitable pathogenic strain, is establishing its infectivity and characteristics by collaborative titrations, and is now poised to use the model to evaluate possible vaccines or antiviral regimes.

5. Virus variability

It is of great importance to understand the mechanism and significance of the unusual degree of variability in HIV, both at the biological level, i.e. effects in cells and relation to disease, and also at the molecular and genetic level. A Concerted Action has brought together researchers with very different backgrounds from across the Community who are together able to make a multidisciplinary attack on this problem.

The open invitation to scientists in the EC has led to original and expert proposals for further Concerted Ac-

tions, of which the following three have been assessed and selected:

— Interaction of HIV proteins with the cell membrane;

— Cell-mediated immune response against HIV/SIV and its significance for vaccine development;

— Neuropathology of AIDS.

3. Clinical Research

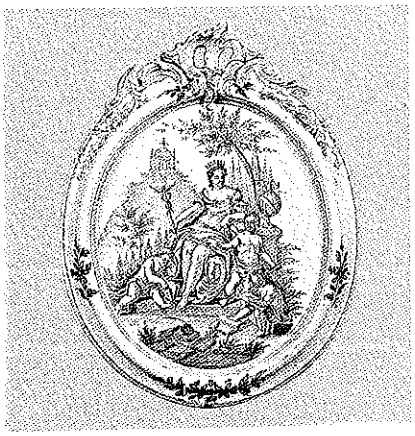
a) Within the EC Network for Treatment of AIDS (ENTA) clinical trials on *opportunistic infections* are on the way:

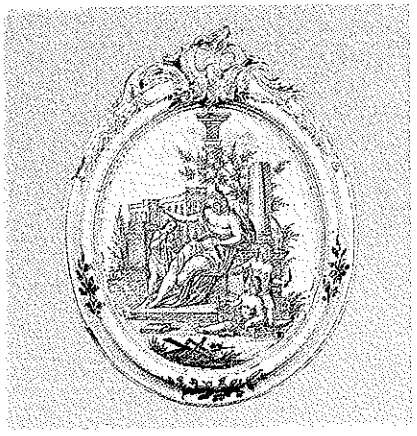
— Primary prophylaxis for Pneumocystis carinii pneumonia (PCP) with fansidar vs dapsone-pyrimethamine vs placebo (leadership centre: Dr A. Pinching, London)

— Oral vs nebulized drugs in secondary prophylaxis of PCP in HIV patients (leadership centre: Dr A. Pinching, London)

4. EVA

The fourth part of the EC Research Programme on AIDS (under the chairmanship of Professor F. Deinhardt, Munich), called a European Vaccine against AIDS (EVA), assists and supports European efforts towards the development of vaccines against AIDS. High-quality laboratory reagents or totally new highly specific reagents needed for selected vaccine development research project proposals will be provided by the centralized facility (NIBSC, Potters Bar, near London -Drs G. Schild and H. Holmes), which is responsible for assay, storage and distribution of the materials.





IV. Future perspectives

General discussions of possible future new activities have taken place between the researchers in the PMGs and members of the EC Research Working Party. It is too early to report in any detail, but the following avenues of thinking emerge:

1. AIDS Disease Control and Prevention

— The Paris Centralized Facility will have to assume a growing role in the collection, analysis and dissemination of data on AIDS and HIV infection within the EC, and may be charged with setting up training programmes for the various epidemiological aspects of and the public health problems related to HIV infection.

— Assessment of ongoing and future preventive measures as well as intervention techniques with infected or 'at risk' individuals (e.g. needle exchange, alternate test sites), will necessitate the further development of reliable indicators (e.g. STD surveillance).

— Behavioural research to establish a base-line against which changes in attitude and behaviour can be measured.

— Forecasting the impact of the epidemic through integrating mathematical modelling with medical, sociocultural, behavioural and economic information, and projecting of future health scenarios.

2. Viro-immunological research

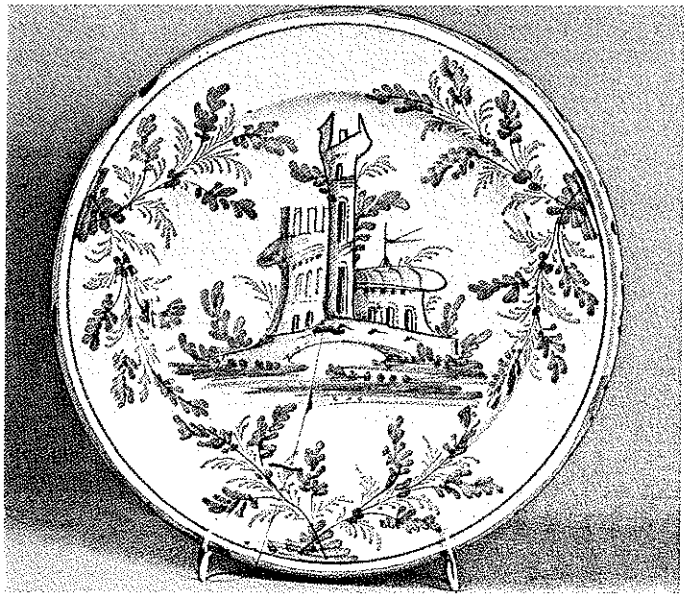
— The development of animal models to be used for drug and vaccine development, as well as for understanding the pathogenesis of the disease, will remain a first priority.

— Molecular monitoring of asymptomatic HIV carriers: Developments in antiviral research are such that, in the near future, asymptomatic HIV carriers are likely to be on continuous treatment, probably firstly with AZT, to be followed by other drugs or combinations of drugs. Molecular monitoring of HIV carriers will firstly be required to find the optimal regimens in comparative trials, and then to adapt and steer the chosen regimens in individual patients. The relevant molecular monitoring laboratories with high-level capacities may themselves need steering by reference laboratories at EC level.

3. Clinical Research

In January 1989 a new concerted action was started (European Network for the Treatment of AIDS -ENTA), aiming to set up and coordinate clinical trials. As a result, there is a greater collaboration among European investigators and accelerated development of clinical trials on Pneumocystis carinii infection, on





treatment and prevention of tuberculosis and on treatment of Toxoplasma encephalitis.

To conduct large-scale collaborative clinical trials of promising experimental anti-HIV drugs, there is a need to design and to establish a network of collaborating clinical centres (so-called reference centres) such as is operational in the USA (AIDS Clinical Trials Group under NIH). Criteria must be thoroughly considered for the selection of such centres, each of which must have specific staff for clinical research, a protocol specialist and a data manager. This network of reference centres will be complementary to the existing ENTA, which already has major responsibility for protocol development and implementation and which acts as a coordinating and centralized data-analysis body.

4. European Vaccine Against AIDS - EVA

As this research action has just started, it is too early to start any new scientific discussions.

5. Antiviral Drugs in AIDS Management - ADAM

Strengthening of the present centralized facility may be considered as a first step by increasing the primary screening capacity, introducing additional primary screening methods, undertaking further research on the mode of action of promising compounds, and even scaling up of production of promising compounds which may not otherwise find an industrial sponsor to develop them further.

ANDRÉ EMMANUEL BAERT
Professor PAOLO MARIA FASELLA

Commission of the European Communities. Respectively, Principal Scientific Officer and Director-General of DG XII - Science, Research and Development

Pastoral Solidarity and AIDS

* *DIONIGI TETTAMANZI*

Introduction

— The many and serious problems raised by AIDS involve the interest of the Church at a profound level and call for pastoral action on her part.

It is true that the mission that the Church has received from Jesus Christ is that of proclaiming the Gospel and communicating the charity of God as a source of salvation to man. But precisely because of this, such a mission concerns man in the totality of his values and in the concreteness of his living. In reality, the Gospel throws its light on different problems of human life, and the charity of God offers new and original energies for the reply that man is called to give to these problems. Man, therefore, the living term of the declaration of the Gospel and the gift of the charity of God, is real and concrete man, or, rather, man as incarnate spirit. Christ is *Redemptor hominis* and not simply *Redemptor animae*. The salvation of the Lord is an 'integral' salvation - it is concerned not only with the soul but also with the body.

Attention and pastoral action by the Church towards those who are ill with AIDS is therefore legitimate, and indeed a question of duty.

— We wish here to 'read' the pastoral action of the Church in the 'key' of 'solidarity', and more precisely of a solidarity developed from its deepest ontological and ethical roots.

Indeed, solidarity does not only point to, or in the first place point to, an *action* to be developed - although this aspect of solidarity, since the problems of AIDS are so complicated and difficult that they can only be tackled and resolved by *in solidum* action, is also essential. Solidarity, however, is something deeper and more essential for the person: it constitutes a distinctive feature of his own being (the person, indeed, is a relational being who is in relationship with others), and it therefore constitutes an *ontological fact*. Consequently, solidarity represents an intrinsic and insuppressible need of the person, who is called to realise himself in conformity with his being, and therefore represents an *ethical fact*, a task entrusted to the responsible freedom of the person.

To speak of solidarity not only at the operative level but also and especially at the ontological and ethical level may seem a discussion which is merely theoretical and abstract - in reality it has very precise and binding operative implications.

This can clearly emerge if we consider solidarity in relationship to its foundation, its content, and its method.

1. The foundation of solidarity

1. The foundation of solidarity is given by that which 'links' people, by that which links them in the most radical sense: people are not linked by what they 'have' (in relation to 'having' there are not only differences but also oppositions), but rather by what they 'are' And in relationship to 'being', people are 'people'; they possess innate and indestructible *personal dignity*.

This dignity of the person is of each and every person - more precisely of each person in every stage of development and every condition of human life.

From this it follows that the person ill with AIDS possesses personal dignity, and in exactly the same way as every other person. This is certainly an elementary statement. But it is also formidable because it constitutes a denunciation and an appeal: the denunciation of all violations of personal dignity that lead to the person who is ill with AIDS being considered and treated as an 'object'; and the appeal to a full recognition — in concrete and operative terms — of his reality of being a rational and free, active and responsible, human 'subject'.

Solidarity with regard to whoever is afflicted with AIDS is based upon and shaped by the recognition of his personal dignity.

Thus have we identified the fundamental ethical criterion from which the pastoral action of the Church must and can draw inspiration. It is now necessary to elaborate upon some of its most important aspects. We will do this in relation to the 'content' and 'method' of solidarity.

2. The content of solidarity

If personal dignity constitutes the foundation of solidarity, the content of the same solidarity is given by what constitutes personal dignity, we could say *the identity of man qua man*.

According to the chief lines of Christian and rational anthropology, which are present in a concrete and extremely suggestive fashion in the biblical pages on the creation of man and which have been taken up and commented upon many times by the Magisterium of John Paul II, the two fundamental characteristics of the human person are *being-with* and *being-for*. The person, above all else, is a person, because he is a 'relational' being, he is an 'I' open to a 'you' - he

possesses an intrinsic and essential structure and a social signification and destination.

More precisely, the person achieves relationship with others through the twofold and inseparable sense of being *with others* and of being *for others*: communion and giving define the identity of the person, his deepest 'truth' and therefore the 'logos' and the 'ethos' of his self-realisation as a person (his 'meaning' and his 'task'). A very simple phrase of richness and radiance is to be found in Vatican II It constitutes the summary of these co-existing characteristics of the person (it is a phrase which is continually quoted by John Paul II): man on the Earth " is the only creature that God has wanted for himself " and who " cannot fully find himself without a sincere gift of himself " (*Gaudium et Spes*, no. 24).

Once again we find ourselves faced with a discussion which is apparently distant from the concrete problems raised by AIDS: in reality it is exactly such a discussion which can clearly and strongly point to certain responsibilities towards these problems.

a) In the perspective of seeing man as a *being-with-others* two serious responsibilities, among others, emerge.

— the first concerns the *social dimension* of the entire question of AIDS.

By now it is well ascertained that the spread of AIDS is to be linked in immediate terms to specific forms of personal behaviour (in particular in the areas of the use of drugs and of sexual life). But it is to be no less linked, in more mediate and indirect terms which are no less effective, to specific forms of social behaviour: it is society itself, especially with regard to the cultural conception that it adopts and develops in relation to the values of life and love, which is the 'conditioning factor' in the diffusion of AIDS, above all else with regard to the weakest and most influenceable strata of the population, such as adolescents.

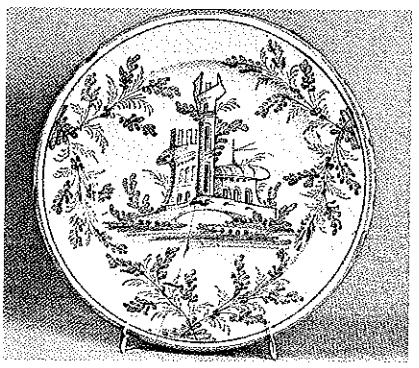
It is necessary, therefore, that this 'conditioning factor' given by society and the dominant culture be in its turn 'conditioned'; that it receive as an alternative response the undertaking to structure social life, and even more the cultural conception, according to different parameters of values and judgements.

We are conditioned, we can and must condition: if conditioned in a negative sense, we can and must condition in a positive sense!

— The second responsibility concerns the twofold need to *defend the healthy* and *to not ghettoize the sick*. The social dimension of the question of AIDS is once again at play, and this requires that the two needs - that of the defence of those who have not yet been infected by AIDS and that of not unduly marginalising those who have been afflicted by AIDS -be harmonised to the greatest extent possible. It is according to this second criterion that certain legal, trade union, and behavioural problems must be solved.

b) From the perspective of man as *being-with-others* two aspects, among others, of great interest and importance emerge.

— The first concerns the *treatment* of those afflicted with AIDS: being for others, or rather love and giving, expresses itself and develops in insuring that these ill people have the right treatment - in the same way as all other ill people, indeed with that 'preference' which is required by the special situation in which they find themselves. We use the term 'treatment' because it both includes and goes beyond those interventions of organic and functional 'healing', and it does this so as to involve all the different forms that there are of care and support for the person.



If the being-for-others is universal need and imperative, beyond different confessions and religious allegiances, such a need and imperative acquires totally new and original content and motivations of faith and Christian charity: the disciples of Jesus Christ are asked to be not just any being-for-others but a being-for-others 'as Christ was', or rather with his love and his spirit of service.

— The second aspect is not to consider those ill with AIDS as simple 'receivers' of a treatment directed towards them, as mere 'receivers' of a service assured to them. They are people: they also, like every other person, are beings-for-others. They also can and must 'say' and 'give' something to other people, to our society. They must be 'protagonists'.

It is the duty of the ecclesiastical community to make these ill people feel that their lives, even in these highly precarious and dramatic conditions, are neither useless nor a burden: they also, in their own way, are living members of the Church and society. As such, they must make their contribution. Moreover, their presence is a very eloquent 'message' for our society, a society which is obliged to see in them the consequences of certain cultural arrangements and lifestyles.

3. The method of solidarity

Solidarity, which is the key by which to read and realise the pastoral of the ecclesiastical community, does not only speak of 'content' but of operative 'method', of a style. It emphasises the need to intervene *in solidum* - the need for a *co-ordination of interventions* in the fight against AIDS.

I would like here to point out certain levels of solidarity-inspired intervention.

a) Solidarity *at the level of the person*

The responsibilities at stake are not of some people, but of everybody. Each person must intervene in rela-

tion to the place or role that he occupies in society: parents cannot take the place of doctors, but likewise doctors cannot take the place of parents; politicians cannot be scientists and scientists cannot be politicians, etc.

On the one hand, solidarity respects 'specific' areas of competence and responsibility; on the other, it needs these different competences to interact and to result in a great 'co-responsibility' towards the common and shared problem of AIDS.

In concrete terms, this co-responsibility involves everyone, but in particular those people who for different reasons are most directly able and interested in solving the problem of AIDS - scientists, doctors, parents and educators, priests, social workers, voluntary workers, institutions, etc.

b) Solidarity *at the level of values and needs*

The fight against AIDS will be effective, and, even more, will operate at a human level, only if, and to the extent to which, it takes into serious consideration *all* the values and *all* the needs of the afflicted person: amongst these values and needs must be remembered those which are moral and spiritual. They are a part of the person *per se*. Respect and promotion of these values and needs are the duties that we all have when faced with the innate, original, and inviolable rights of the person.

The presence of interventions which are partial or contradictory in relation to the totality of the values and needs of the ill person should here, instead, be observed. One thinks of certain forms of prevention which involve only technical resources and which neglect the deepest necessities of man.

c) Solidarity *at the level of institutions*

The fight against AIDS requires a further form of solidarity: that among the different 'institutions' which are involved, such as the Church and civil society, the public and the private, scientific-technical intervention and human intervention, the presence of the doctor and the presence of the voluntary worker, the hospital and the home, etc.

d) Solidarity *at the level of dimensions*

The phenomenon of AIDS now constitutes a 'worldwide' problem, as it is no longer confined to one group or other in the population or some country or other.

This calls for an operative co-responsibility which has a truely worldwide horizon.

And it is from this perspective that the difficult but urgent problem of bringing help to the so-called underdeveloped countries must be tackled: help of a many-sided and varied kind which goes from the offer of information to the offer of economic help.

Conclusion

Whether it is wanted or not, solidarity is a fact: in every circumstance of human life, and in that of AIDS as well.

We are not called to choose between solidarity or nonsolidarity—this is an impossible choice!

The only choice that is possible concerns the type of solidarity: either negative solidarity or positive solidarity.

This international conference seeks to be an appeal to everybody to choose positive solidarity.

H.E. Monsignor D. TETTAMANZI
Archbishop of Ancona-Osimo
Italy



Pastoral Care Based on Hope

✠ KARL LEHMANN

It is not easy at the end of such a large congress — at which thirty papers were presented — to say something that still has weight, after all the new and profound insights we have been given. Nonetheless, I will try, not confiding so much in my own ability, but rather in the strength of the Gospel of Jesus Christ, which repeatedly stands the test in all life situations.

In this context I will restrict myself to the basic outline of a " pastoral care based on hope. " I will not deal with the potential needed for healing and care or with the institutions that need to be created or reorganized for AIDS patients. These topics already been talked about.

What I am saying is perhaps not very probable for many AIDS patients. We, as a Church, sometimes have trouble dealing with them, and they often have trouble dealing with us. However, I am not willing to accept resignation of this kind. What I intend to set forth here is a real option. This, I feel, is sufficient in this context.[1]

I
HOPE BASED ON REALITY

The subject I have been given to talk about is deceptive in that it could mislead people into expecting this still rather vague hope to provide an answer to the many questions and fears caused by AIDS. In many respects the " hope principle " has become a fashionable term that attracts and fascinates many people because of its mutifaceted and ambiguous nature. There are numerous temptations. Patients are told there may still be a way of healing them. They are encouraged to hope for a miracle cure. The hopelessness of the current situation is passed over, its importance is played down, and salvation beyond death is promised.

We know, however, that many AIDS patients are uncompromising in their demand for truth and clarity. As such, they seek an upright and honest partner. They want to talk about the ineluctable reality that is so oppressive to them. A basic maxim for any kind of pastoral assistance to the terminally ill in general and to AIDS patients in particular follows from this: *any promise of hope to a severely ill person must not overlook the bitter reality of suffering and death in a facile manner and, instead, must face the full reality of the situation the suffering individual is faced with.* It is only when those assisting the ill courageously face up to a hopeless situation and do not flee from it that pastoral activity of this kind can provide genuine consolation, consolation that is neither based on empty promises nor suspect of ideological formulations



II
HOPE FOR THE TERMINALLY ILL IN LIFE

What does this hope look like in a life doomed to death?What is hoped for derives entirely from the situation in which someone hopes for something. The specific situation of AIDS patients puts any hope to the test. This is indicated clearly in the following.

1. AIDS patients hope for faithful and sincere support

Regardless of how much we are able to do for AIDS patients in medical terms and regardless of the amount of care provided by physicians and nursing staff, they need someone to accompany them in their grief, someone who will tell them " *I'll stick by you.* " There are many reasons for this kind of longing for human companionship: loneliness, isolation from family and friends, resignation, anxiety, depression and fear of dying.

It is not easy for a companion of this kind. He (or she) may encounter a flood of hostile feelings that often affect him (or her) as well: lamentation, rage, resentment and envy. It is, among other things, the fear of being disfigured and dependent. It is anger at having to die unnecessarily at an early age. In such situations the companion must remain steadfast, like a faithful watchman, even when faced with outbreaks of hopelessness, helplessness, frustration and hostility. It is of decisive importance that the companion be able to withstand these feelings and not flee from them. Sometimes he will remain silent and perhaps express himself less in words and fulfil his function more through the eloquent language of physical presence and silent dedication. He will try to create a feeling of closeness in the presence of fear, a sense of acceptance despite the patient's feeling of being lost, and a sense of attention to the patient's needs despite temporary rejection. The companion must be equipped with a sense of solidarity and support that is strong enough to enable him to cope with the ups and downs of rebellion and fatalism evoked in those whose fate it is to be afflicted by this disease. God accompanies this process silently and often in hidden manner in the person of companions of this kind

2. AIDS patients hope for protection from discrimination and rejection

The loneliness of AIDS patients is not based only on a neutral isolation from the rest of the world. It is aggravated greatly by rejection from the outside. Persons in this situation are often unable to cope with the oppressive fear involved, since they are abandoned by their relatives, friends and acquaintances. Loneliness becomes unbearable when a good network of social relations is destroyed. The iron ring of isolation often creates a sense of condemnation that stays with the person until he or she dies. The discrimination involved consists in the fact that individual AIDS patients, particularly if they are members of minority groups with practices that deviate from the norm, are considered unworthy or are attributed a lesser value.

Often next of kin fail to show an interest. Even parents withdraw from the situation. " I haven't heard anything from my mother for a long time, " is something often heard. The AIDS patient is treated like a scapegoat, regardless of whether he or she bears personal guilt or not. In this situation of rejection the selected companion is often the only one able to overcome isolation - standing in, as it were, for the others and creating a sense of togetherness and closeness Discrimination must not be strengthened by moral condemnation from the outside. As such, wrong actions are not simply written off as being uninteresting, but freedom from individual guilt is not the prerequisite for loving one's fellow man in accordance with the teachings of Christ.

Dedication to and attention to another fellow human being must not be made dependent on the behaviour of that person. Encountering Jesus changes life, as we are shown in the Gospel according to St. Luke in the instance of the chief publican Zaccheus (see Luke 19:1-10). In this sense, Jesus definitively severed the line of connection between disease and guilt, a connection almost magical in appearance (see John 9:1-3).[2]

3. AIDS patients hope to have a friend for what is left of their lives before dying

The companion reaches out to the AIDS patient to give him a bit of life. What is involved is not just providing support to terminally ill persons, as important as this continues to be. On the contrary, dying must once again become a part of life Concern for the human individual as a whole must be placed in the foreground. It is not just the length of life that counts but also the quality of life. AIDS patients see an opportunity in the fact that even though it is not possible to lengthen their lives, they can, however, change the quality of their lives. Many people notice during this period of time that they had never accepted the fact they will die. However, those who have not learned to die have also not learned to live. One patient in a very difficult phase of his illness said: " In the past six months I haved lived more that I did in all the other years. My life is no longer so superficial "[3]

There is no general formula to follow. Every AIDS-patient companion has to travel this route independently and in a different manner with his or



her patient. It is no accident that in many stories connected with this disease the images of a " walk "or a " journey " are recurrent.

Reference is made to a " wonderful journey " connected with the hope of " coming home " [4] This journey creates a timespan, a little longer to stay alive. Sometimes there is the presentiment of a final journey The image of death as the end of a pilgrimage spontaneously comes to mind. It is certainly no accident that " cleaning house " can play an important role as a real activity and in a symbolic sense—cleaning house in one's own life.....

There are no set patterns to follow. Everything must be based on the specific needs of specific individuals right up until the end. Providing companionship in life and in death requires a great deal of us, since it involves denying our own wishes and hopes. Unrestricted presence and companionship is everything. Mission recedes as a function. Whath is required is to cope with the difficulty of letting go, letting go of one's own body, of earthly hopes and, finally, of life in this time. " I should let what will happen happen. "

III
THE ACCEPTANCE OF EARTHLY HOPELESSNESS

What will happen on this last stretch of road cannot be predicted. Any hope that focuses exclusively on this time will come under increasing pressure. Having to accept death is the horrible part. The monstrous fact that everything is coming to an end has a strong impact and evokes anger. There is room here for the " phases, " or perhaps it would be better to say " situations, " E. Kübler-Ross[5] talks about: " Disbelief and isolation, " " resentment, " " negotiation, " " depression " and " acceptance. " These situations — which need not necessarily occur in the sequence indicated — have something to do with the two forms of hopelessness discussed in classical thinking on hope, i e, the presumptuousness of anticipating perfection and fulfilment in this time, and the despair that denies one's own longings and gives up hope. Many patients enter into a situation in which they curse and condemn themselves. " I know I am the one who got myself into this mess. " We must see more than a confession of guilt in words of this kind. Guilt is involved, but a confession like this is protest against life in general.

Those who accompany AIDS patients on the road to death need to be cautious about providing rapid explanations in this context. Two reactions common in many religions are dealt with critically in the book of Job. The theology of retribution sees in God the ultimate cause of suffering. It is God who arranges things such that all suffering is punishment for sin (see Job 4:17ff; 18:4, 21-26; 22:12f). Education based on suffering, on the other hand, sees in pain a God-sent trial in which the suffering individual is tested. The individual in question is purged in a process of purification (see Job 5:17f; 33:14ff; 36:21) Job is dissatisfied with answers of this kind from his friends (see Job 42:7). However, God also criticizes them for not giving enough attention to God himself and to human suffering (see Job 13:7; 42:8).[6]

This warning continues to hold for Christians. The normal human reaction to suffering is lamentation. This lament to God can appear like a revolt, but is — as Job shows — a genuine prayer on the part of a suffering individual crying for life. This suffering is experienced as physical, psychological and social presence in the sphere of death (see Job 17:11ff; 19:14ff). Many superficial images of God break down in connection with human lamentation.

The Bible is aware of this silence in the face of incomprehensible suffering. We need only think of the figure of Job, the suffering of the righteous (see Lamentations of Jeremiah 3), the spiritual crisis in Ecclesiastes the prayers of the sick and the laments in the Old Testament.[7] Who would not think here of the servant of God (see Isaiah 42:1-4; 49:1-6;50:4-9; 52:13- 53,12). " Even as many were amazed at him, so marred was his look beyond that of a man and his appearance beyond that of mortals, " (52:14) " yet it was our infirmities that he bore, our sufferings that he endured, while they thought of him as stricken, as one smitten by God and afflicted " (53:4).

It would certainly be wrong to want to see these examples and images realized in every AIDS patient. We have also seen other things. Many patients do not change their living habits. Their view is that " you have to die



anyway. " However, the indicated statements by praying persons warn us against rapidly placing a strong theological focus on hopelessness. Rapidly imposing a positive perspective on disaster is very dangerous. This is something we have been taught, after all, by the cross of Jesus Christ. The " man of pain " bore the incomprehensible sufferings of the world. The most innocent person was made the most guilty.

Christians in our time have recurrently discovered this enigmatic and mysterious depth of suffering. We need only think of Rheinhold Schneider's solidarity with the cry of the suffering creature he left to us in a book entitled *Winter in Vienna,*[8] or of the moving book by the Tübingen Old Testament scholar Friendland Stier *Vielleicht ist irgendwo Tag* (Freiburg-Heidelberg 1981), in which he cries out against suffering and pain in all of creation and, similar to Job, places himself in the hands of God.

In every century people have projected their personal affliction into the image of Christ crucified and, in so doing, have unified the suffering of Jesus Christ with their own suffering. This applies in particular to the great plagues. This brings to mind the so-called " plague cross " on which Jesus is depicted with this deadly disease, or of present-day crucifixes with the flayed and bent body of a tortured Jesus Christ, a figure that could be taken from many of the prisons in our time. They all have something in common: those who want to maintain and credibly proclaim true hope cannot and must not disregard earthly hopelessness. It is only if we accept it, share it and bear out the suffering involved that healing is possible. There is only salvation in " hope against hope " (Romans 4:18; see 8:21 and 24). Shouldn't this also apply in the case of AIDS patients — at least in anonymous and hidden form — at least for those who do not lose all hope despite their disappointment?

IV
THE MIRACLE OF FAITH: HOPE AGAINST HOPE

Under such circumstances AIDS patients, like all critically ill individuals, may experience an unusual deepening of their lives. While still in the midst of life they die many small deaths; for instance, in taking leave of their homes, of their friends and their jobs. However, the time given to the individual can bring about a change. Many terminally ill individuals learn to change their lifestyles and attitudes towards life. In this context they are expected to deal with a reality that escapes many " healthy " individuals. Many look to the crucified Jesus of Nazareth and, as they approach death, begin a new life

The following is certainly not something that happens every day, perhaps even very rarely, but nonetheless is something that really happened: " I view religion now in an entirely different way from a few months ago. Religion now genuinely means something to me. I go to church regularly, where I am learning things and the church calender means something to me. I identify with the suffering of Christ, since I am going through my own suffering and in this manner the way is laid out for me. " " Since my diagnosis I have gone to church regularly, something that was both a revelation and, at the same time, something revolutionary for me. Now I understand a great deal more than I did in the past and I find great strength in the Psalms and in the story of Christ. I have a great deal more spiritual and religious depth now. "[9]



One patient was able to say about this last stretch of road: " I have grown enormously in a religious and spiritual sense. " Suffering is understood as a divine query to the person involved. It is an extremely moving and profoundly tragic experience that it is a fatal disease that brings about this change in life. Under a radical threat, people begin to live their own lives. Life derived from death gives human existence its meaning. For the first time it is learned what it means to live consciously and to die consciously. Many of those who are fatally ill sense that the full maturity of their lives will be attained through death. " So much that is wonderful is now happening in my life. " We may associate the idea of judgement with this. It becomes manifest, in terms of God's standards and in the encounter with him, what was wrong in the patient's own life and in his or her moral behaviour. However, the appeal " You must change your life! " which, in view of the fact that the person's existence is coming to an end, emanates from the Lord over life and death, does not create fear but rather removes that which is oppressive and leads into a relieved life with light on the horizon. In this light an AIDS patient made the following astounding statement: " This incurable disease, AIDS, was a major blessing for me. It was a major test. It continues to be that every day.... " This is an enormous statement, one only a terminally ill individual can make and one that makes the rest of us fall into humble silence.

The purification of a person's life must thus not lead to total self-condemnation or to self-hatred. The AIDS patient knows that he or she is nothing but an empty shell, a chalice of suffering...; however, the terminally ill patient can learn in faith that he can place himself in the hands of a just but nonetheless kind and merciful God who will accept him lovingly. Redeeming and forgiving words are contained in the sacrament of atonement.

Otherwise the Gospel message of God's constant search for the lost and God's mercifulness would not be correct. When darkness comes, it is God's darkness. The Lord will lead those who place their hope in Him through the night of death to new life just as He saved His people from their plight in Egypt. Every Passover, the celebration of the death and resurrection of Jesus, as well as the correctly understood sacrament of extreme unction remind us of this " passage " through the narrow gates. Here, intimate acquaintanceship with the suffering, death and resurrection of Jesus Christ becomes a concrete reality. It is the inextinguishable light of eternal life.[10]

Now we can return to the word of hope once again. Hope in the ultimate sense, hope that does not fail in the face of death, exists strictly speaking only in God. Physicians can save, but only God can save in a final sense, providing eternal salvation. Hope relates to God, who, for us, becomes an absolute and indestructible future where everything else is lost. Hope has something to do with the individual's letting go of himself, in the end confiding in and giving himself over to God's radical inaccessibility. Hope, as a focus of faith, love, insight and will enters into this human relationship with an unshakable basis for meaning in life which, for us, is the living God in Jesus Christ. The death of Jesus Christ is itself the most radical act of hope: " Father, into your hands I commend my spirit " (Luke 23:46 and Psalm 31:6). Salvation from God is the only place where those without hope are able to derive strength and courage. After the cry of being forsaken by God was emitted and Jesus Christ himself descended into the extreme darkness of the kingdom of death there can be no place where there is no salvation. True hope is the sacred courage to give ourselves over to the mystery of God that exceeds all understanding. In its full form this presupposes faith and prepares the way for love.[11]

AIDS patients are not only acceptable to Christians when terminally ill or weakened by helplessness and approaching death. Hope is of course not directed only towards a state of total health, towards successful treatment or towards an extended life. Christ accompanies AIDS patients in the small hopes of their lives and remains with them when the great hope can become reality in dying. Will it become reality or will everything remain a beautiful and comforting utopian vision? " Will AIDS patients ever achieve the phase of acceptance and peace? Yes, the same applies to them as to all other terminally ill persons. If we allow them and if they allow themselves to express their grief and their tears, their helplessness in the face of this virulent and deadly virus and in the face of a society that discriminates against them, condemns them, places the onus of blame on them, and in a base manner gloats over the fruits of the unhealthy lifestyle these patients manifested. If they have sufficient support from people who will simply love and accept them, and give them the natural attention all human beings need, particularly when they are sick, then and only then will they achieve the phase of peace and acceptance that makes the transition we refer to as death a process of quietly slipping into a different form of existence. "[12]



Even when there are no immediate and visible signs that this great hope will come true, we Christians must not simply give up hope. No one knows how God approaches man and accepts him in death. Death continues to be the profoundest mystery known to man. God can save people in many ways. In any event, " he wants all men to be saved and come to know the truth " (I Timothy 2:4). This is why our intercession is necessary for all those who are sick and dying. It is only in the hope given to us by God that we will be able to overcome and defeat hopelessness. Let us not forget that we take this hope into the main mystery of the Eucharist — the death of the Lord for us all — and that we do so daily throughout the world: " We also recommend to you those who have returned home in the peace of Christ and the dead of whose faith only you know." [13]

Judgement and purgatory are words for this final salvation. However, the Second Vatican Council rightly says that " The Holy Spirit offers to all the possibility of being made partners, in a way known to God, in the paschal mystery " (*Gaudium et Spes*, No. 22). These ways of salvation are known only to God (see Mission Decree *Ad Gentes*, No. 7; Church Constitution *Lumen Gentium*, No. 16).

In the end, the only answer to the challenge posed by the incurable dis-

ease AIDS is the confession: " I believe in eternal life, " taken in its full breadth and depth. Death no longer has the last word. Jesus Christ has become " the death of death, " even if fear of it has remained. Faith can mobilize unsuspected strength and move mountains.[14] Union with God in Jesus Christ is something that survives death. For this reason it alone can lessen the extreme contrast between life and death in its finalness and bitter hopelessness. " For I am certain that neither death nor life, neither angels nor principalities, neither the present nor the future, nor powers, neither height nor depth nor any other creature, will be able to separate us from the love of God that comes to us in Christ Jesus, our Lord " (Romans 8:38f).

These are the basic outlines of " pastoral care based on hope. " We must not deny it to the world and, most of all, we must not deny it to the incurably ill and all those who suffer from AIDS. We must not reduce our message to a few narrow areas of moral theology such as the assessment of homosexuality, contraception and sexual intercourse on the part of AIDS patients. These questions are important in their place, but, in the final analysis, they can only be resolved convincingly on the basis of the full Christian Gospel. If we genuinely preach " hope against hope " (see Romans 4:18), the ethical questions that derive from this virtually resolve themselves. Faith, morality, charity and duty are closely interrelated here. We must not bury our genuine treasures



V
THE WITNESSES OF NEW HOPE

The indicated light of hope needs living signs and courageous bearers, particularly in the face of the horror-evoking darkness of AIDS. Thus far we have made conscious reference to " companions. " Who is meant by this?

The reference here is, first, to all Christians, all people of good will and, in particular, to persons involved in medical, nursing, social and, above all, pastoral services for AIDS patients. I am referring here to the families, relatives, friends and acquaintances of AIDS patients, the people who otherwise constitute a familiar social environment for them. Assistance to AIDS patients near us is part of Christian testimony of faith, hope and love. Physicians and nursing personnel will not view their work only as a " duty. " They will also do it out of concern for the very unfortunate sisters and brothers involved. This also applies to researchers engaged in an effort to find ways and means of fighting AIDS medically. It corresponds to a particularly urgent moral obligation as human beings. Finally, the term " companions " refers to all those persons who provide pastoral care and fellowship up until the death of AIDS patients. They accompany the fatally ill on behalf of the Church and in the name of the God of love and mercy. They contribute to the pastoral care of the Lord, who did not want to lose even one of His flock and — when priests are involved — speak the strengthening words of atonement and healing contained in the sacraments of repentance and extreme unction.



Living with AIDS patients means that we need to work against the social tabooingof death and must let ourselves become aware of the inevitability of our own death. What we are doing is certainly a help for those dying of AIDS. However, we may experience their living and dying as an even greater help for ourselves, since it teaches us life's most profound lessons.

Bishop KARL LEHMANN
Mainz (Federal Republic of Germany)
Chairman of the German Bishops' Conference

[1] An extensive list of moral theology literature on the AIDS problem is not included here, since these questions are not the immediate subject at hand. However, for purposes of orientation, see A.W. Eiff/J. Gründel, Von Aids herausgefordert. Medizinisch-ethnische Orientierungen (Freiburg 1987); J. Gründel (ed.), AIDS, Herauforderung an Gesellschaft und Moral = Schriften der Katholischen Akadenie in Bayern 125 (Dusseldorf 1987, 1988[2]) J. Reiter, Aids - Wege aus der Krankheit (Cologne 1988); A.W. Eiffet, AIDS, Gefährdung und Vorsoge (Freiburg 1988); B. Fleckenstein/D. Mieth/O. Seewald, Aids, in: Lexicon Medizin, Ethik, Recht, edited by A. Eser/M. Lutterotti/P. Sporken (Freibirg 1989), 2-29 (most recent publications).

[2] On John 9:1ff and on Jesus's understanding of disease see, in addition to the commentaries, K. Seybold/U.B.Müller, Krankheit und Heilung = Biblische Konfrontationen (volume 1008) (Stuttgard 1978). 126ff;see also notes 6,7 and 14.

[3] Individual testimony by AIDS patients is

indicated in the following, for which I will not indicate sources Almost all of them are taken from literature referring to more practical and direct assistance. E Kübler-Ross, AIDS, Herausforderung zur Menschlichkeit (Stuttgart 1988, American original edition 1987); G Schorberger, Aidsstation: Wege humaner Begleitung (Munich 1987), there see in particular J Bußmann, AIDS -Plädoyer für eine Seelsorge als Sorge um den ganzen Menschen, 127-149; T. Kruse/H Wagner (eds), AIDS, Anstoße für Unterricht und Gemeindearbeit (Munich 1988); H.R. Zielinski (ed.) Ist dir überhaupt klar, daß ich AIDS habe? Briefe eines HIV-Positiven (Mainz 1989); A.Walter, AIDS als Versuchung, Christliche Existenz und schwere Krankheit = Kaiser-Taschenbücher 55 (Munich 1989) (again extensive bibliography pages 154-179)

[4] See also S.Sontag, Aids und seine Metaphern (Munich 1989, American original edition 1988); Th.H. Macho, Todesmetaphern, Zur Logik der Grezerfahrung = edition suhrkamp NF 419 (Frankfurt 1987); D Sölle, Die Hinreise (Stuttgart 1975).

[5] See E. Kübler-Ross, Interviews mit Sterbenden (Gütersloh 1973[2], Stuttgart 1971) - I choose not to go into later statements by the author betraying influences of the New Age movement and reincarnation ideas.

[6] See on Job: Daas Buch I jjob. Hebrew and German, published by F. Stier (Munich 1954); E. Zenger/R. Böswald, Durchkreuztes Leben, Besinnung auf Hiob (Freiburg 1976); H.P. Müller, Das Hiobproblem = Erträge der Forschung 84 (Darmstadt 1978). See also notes 7 and 14.

[7] See G.v. Rad, Weisheit in Israel (Neukirchen 1970). 245ff; K. Seybold, Das Gebet des Kranken im Alten Testament = Beiträge zur Wissenschaft vom Alten und Neuen Testament 99 (Stuttgart 1973); C Westermann, Lob und Klage in den Psalmen (Göttingen 1977); E.S. Gerstemberger, Der bittende Mensch = Wissenschaftliche Monographien zum Alten und Neuen Testament 51 (Neukirchen 1980); R. Brandscheidt, Gotteszorn und Menschenleid, Die Gerichtsklage des leidenden Gerechten in Klgl 3 = Trierer Theologische Studien 41 (Trier 1983); O. Fuchs, Die Klage als Gebet, Eine theologische Besinnung am Beispiel des Psalms 22 (Munich 1982); O. Kaiser, Ideologie und Glaube, Eine Gefährdung Christlichen Glaubens am alttestamentlichen Beispiel aufgezeigt (Stuttgart 1984); H. Graf Reventlow, Gebet im Alten Testament (Stuttgart 1986); H.J. Stoebe, Geschichte, Schicksal, Schuld und Glaube = Athenäum Monografien; Theologie 72 (Frankfurt 1989)

[8] On this book, which appeared in 1958 (Herder-Verlag Freiburg) see I Zimmermann, Der späte Reinhold Schneider = Schriften der Reinhold-Schneider-Stiftung Hamburg 1 (Freiburg 1973); Widerruf oder Vollendung, Reinhold Schneiders " Winter in Wien " in der Diskussion = Schriften der Reinhold-Schneider-Stiftung Hamburg 3 (Freiburg 1981)

[9] E. Kübler-Ross, AIDS (see note 3), 162.

[10] In the following a number of references to eschatological questions are kept fairly general. The subject can be further developed by referring to the following publications: Jesus Christus ist auferstanden (Freiburg 1975); Jesus Christus, unsere Hoffnung (Freiburg 1976); Was heißt " Ewiges Leben "? = Antwort des Glaubens 3 (Freiburg 1978); Die verlorene Fähigkeit zur Umkehr, in: Internationale Katholische Zeitschrift " Communio " 7 (1978), 385-390; Weltgericht und Wiederkunft Christi, in " K. Lehmann, et al., Vollendung des Lebens - Hoffnung auf Herrlichkeit (Mainz 1979) 82-102; Was bleibt vom Fegefeuer, in: Internationale Katholiche Zeitschrift " Communio " 9 (1980) 236- 243; Er wurde für uns gekreuzigt, Eine Skizze zur Neubesinnung in der Soteriologie, in: Theologische Quartalschrift 162 (1982) 298-317

[11] From the extensive literature available on understanding hope I will mention only J Pieper, über die Hoffnung (Munich 1949); K Rahner, Zur Theologie der Hoffnung, in: Ders, Schriften zur Theologie VIII (Einsiedeln 1967) 561-579; J. Pieper, Tod und Unsterblichkeit (Munich 1968); Biblical see C. Westermann, Das Hoffen im Alten Testament, in: Forschung am Alten Testament = Theologische Bücherei 24 (Munich 1964) 219-265; G. Nebe, " Hoffnung " bei Paulus = Studien zur Umwelt des Neuen Testaments 16 (Göttingen 1983)

[12] E. Kübler-Ross, AIDS (see note 3) 19f.

[13] This prayer from the fourth high prayer of the modernized Eucharist celebration deserves greater attention and interpretation. For theological and spiritual development of what is presented here, see also L Giudice, Die Kraft der Schwachen, Über das Krainksein (Stuttgart 1979); E. Lange, Nicht an den Tod glauben, Praktische Konsequenzen aus Ostern = Kaiser-Traktate 67 (Munich 1982); K. Spiecker, Leben und Sterben, Über den rechten Umgang mit Sterbenden (Würzburg 1989)

[14] See W. Rebell, Alles ist möglich dem, der glaubt, Glaubensvollmacht im frühen Christentum (Munich 1989); O. Kaiser, Der Mensch unter dem Schicksal = Beiheft zur Zeitschrift für die alttestamentlische Wissenschaft 161 (Berlin 1985).

[15] See G. Concetti, AIDS, Problemi di coscienza = Azione Pastorale (Casale Monferrato 1987, Ed Piemme); G. Visco/E. Girardi, AIDS, Epidemia del secolo? (Rome 1989, Ed. Riuniti). For moral theology questions see W. Ernst (ed.), Grundlagen und Probleme der Heutigen Moraltheologie (Würzburg/Leipzig 1989).



AIDS Legislation Around the World

PROFESSOR HIROSHI NAKAJIMA

Permit me to begin by thanking you, Professor Marini Bettolo, and you, Archbishop Angelini, for the courtesy of your invitation to address the last working session of this historic Conference. I regret that, owing to commitments in Geneva, I was unable to be present for the first two days. I am, however, deeply gratified that the *Proceedings* of the Conference will be published in full, since I am confident that I shall gain much by reading what I understand were outstanding presentations at the earlier sessions.

Both the Pontifical Academy of Sciences and the Pontifical Council for Pastoral Assistance to Health Care Workers are bodies of the highest eminence. I have been personally privileged to have worked with both the Academy and the Council in the past. I am aware of their deep interest in the World Health Organization and their important contributions to its work. By organizing this Conference, and by bringing together such an extraordinary array of distinguished participants, the Academy and the Council, and the entire Catholic Church, have demonstrated their awareness of the clinical and biomedical, and also the moral, ethical, and spiritual, dimensions of the AIDS pandemic.

You have indeed recognized the " many faces of AIDS. " Your choice of moderators, speakers, and panelists testifies to the fact that you share with WHO a profound conviction that AIDS is a multifaceted problem, amenable to control only by policies, strategies, and programmes that are based on a multidisciplinary approach. The programme for the Conference reflects that fully. What vision, what imagination, what insight to have brought together persons who have distinguished themselves in basic science, such as Professor James Watson, in the biomedical sciences, such as my good friends Professor Luc Montagnier and Professor Robert Gallo, and clinicians, medical scientists and researchers, philosophers, ethicists, theologians, senior administrators, and persons representing many other disciplines. All have much to contribute, from their professional and personal experiences, to our understanding of the past decade and to the struggle that lies ahead of the global community. Perhaps no other institution more than those you represent, Professor Bettolo and Archbishop Angelini, could have brought together the disciplines I have mentioned, and added to them Mother Theresa of Calcutta and the Honourable Giulio Andreotti, Prime Minister of Italy, a country for which I have the deepest affection.

I know, too, that this Conference could not have taken place without the personal commitment and support of His Holiness, Pope John Paul II. WHO has fully exercised its constitutional mandate to act as the directing and coordinating authority on international health work, a mandate laid down in the very first paragraph of Article 2 of its Constitution. That Article also specifies that WHO is to work with other agencies in the United Nations system, national health administrations, professional groups, and so on. It has done so in an unprecedented manner. I need scarcely remind this distinguished audience of the resounding endorsement of the WHO Global Strategy for the Prevention and Control of AIDS at all levels of the United Nations system, up to and including the General Assembly. The resulting interaction and contacts with organizations representing all sectors concerned has been enriching and mutually beneficial.

Article 2 of the Constitution also calls on WHO to work with governments, at their request, in strengthening health services. In responding to a number of requests from all corners of the world, WHO supported vigourously the countries' own national health and social systems to combat AIDS. As of 1 November 1989, WHO was working with the authorities of more than 150 countries and territories in the development of national AIDS programmes.

Article 2 of the Constitution further calls on WHO to maintain epidemiological and statistical services. The none-too-easy task of monitoring the spread of AIDS and HIV has been assigned to a cadre of competent and dedicated epidemiologists in WHO offices throughout the world. We have looked beyond the current figures and estimates and have developed models and predictions of the spread of the pandemic into the 1990s and beyond.

The promotion and conduct of research in the field of health is yet another constitutional function of WHO. We cannot, of course, replicate or emulate the brilliant basic and applied research being undertaken around the world on the biomedical, clinical, social, and behavioural dimensions of AIDS. Nor, I believe, should we be doing so. What we can and must do is to endeavour to coordinate the efforts of scientists and physicians in the academy, in hospitals, in government institutions, and in the research-based pharmaceutical industry. Moreover, we must examine the ethical, legal, and policy implica-

tions of some of the research being carried out. For AIDS research, especially research on candidate vaccines and new anti-retroviral therapies, has brought with it problems of a new order, and dilemmas that have not previously been encountered. We shall not fail to involve all interested parties in the process of developing and formulating frameworks for the ethical conduct of AIDS research.

Time does not permit me to dwell on the many other functions defined in Article 2 of the WHO Constitution. However, one function seems particularly important in the context of this Conference. It is " to assist in developing an informed public opinion among all peoples on matters of health. " I believe that WHO has contributed in no small measure to ensuring that much of the public, in developed and developing countries alike, is aware of such critical aspects as the modes of transmission of HIV and the types of personal behaviour that will help to prevent its spread. Among the messages received from world leaders on World AIDS Day last year was one of unprecedented support from His Holiness the Pope, in which he associated the Vatican with WHO's work in sensitizing the public authorities and public opinion to means of combating the disease. The events in Geneva to mark the Day were attended by, among others, Madame Danielle Mitterrand and Her Royal Highness, the Princess Chulabhorn of Thailand. They were only a small though significant part of global mobilization endeavours. This year's World AIDS Day will focus on young people, who are critical to our struggle.

Let me turn to the subject of AIDS legislation. All of you will have received a copy of the paper prepared by my colleagues in Geneva. I shall not add to it, except to say that, under its Constitution, WHO has no mandate to impose, or even to propose, model legislation or model regulations. It has not done so, and does not propose to do so in the future. Yet we do have a constitutional mandate to disseminate information on national and, by analogy, international health legislation. This is a mandate we inherited from one of our predecessor organizations established by a diplomatic agreement signed in Rome 82 years ago. Work on AIDS legislation began in the spring of 1983, when the first national legislation began to appear. We fully recognize that countries are sovereign in this area and we would like to support the process of development of legislation when requested.

In this respect we have been active in assisting national policy-making and legislative action. There is a multiplicity of areas in which, I firmly believe, WHO's proactive stance has helped to avert the introduction and implementation of legislative measures that would be contrary to the interests of public health. Our consensus statements and the equivalent on criteria for HIV screening programmes, HIV and international travel. AIDS in prisons, AIDS in the workplace, the neuropsychiatric manifestations of HIV infection, and so on, have drawn the attention of governments throughout the world to the need for AIDS legislation to be based on thorough analysis, not on emotion or rhetoric. From what we know to date, the clear message that emerges is that it is possible for legislation to achieve the fine balance needed between individual rights and the rights of the community. However, as the epidemic evolves, as science contributes to our understanding of the disease, and as new tools are developed for control and treatment, new consensus statements will be needed.



Let me paraphrase what Admiral Watkins said in his report as Chairman of the United States Presidential Commission on the Human Immunodeficiency Virus Epidemic:

Our societies are judged by how *they* respond to those in greatest need. A tragedy such as the HIV epidemic brings *our societies* face to face with the core of *their* established values, and offers an opportunity for the reaffirmation of compassion, justice and dignity.

Legislation is required to guide our actions to solve problems or to avoid them. Much of the legislation about AIDS has been made necessary because of the lack of knowledge about the disease when it first appeared. As we noted earlier, much of it dealt with protection of the rights of man and the rights of the community. But we now know a great deal about the disease, and our knowledge about the extent of its spread among nations increases day by day. It is my fervent hope that we shall soon arrive at a time when there will be no need to impose compassion by law. Surely this is the essence of our humanity.

WHO's role as coordinator has been found useful. This is something we are happy to continue to do, as long as we have the means to do it. And there is also the need to ensure speedy exchange of information. We shall spare no effort to ensure, as much as we can, equity of access to the new tools that are becoming available in our fight against this disease. But this is not a task we can accomplish alone. We must be and are our brothers' keepers.

Thank you for your attention.

Professor HIROSHI NAKAJIMA
Director General of the World Health Organization (WHO), Geneva

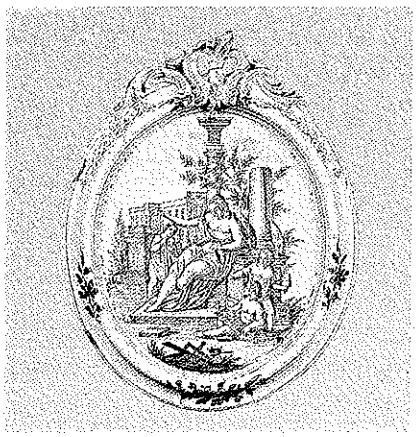
AIDS Legislation in Different Countries

PAPER PREPARED BY THE WHO SECRETARIAT, GENEVA

As Albert Camus reminds us in *The Plague,*[1] the enactment of legislation is one of the characteristic responses of societies to outbreaks of communicable diseases. Legislation is perceived, but sometimes misconceived, to be a panacea for interrupting or hindering the propagation of infection. It is unlikely that legislation *per se* can achieve these objectives, unless it is understood that the law is merely a vehicle for implementing a policy, whether in the field of AIDS or other aspects of health. It can be a powerful, indeed vital, vehicle; yet legislation for the sake of legislation, or intended only to suggest that the authorities are " doing something, " can be counterproductive. Well-conceived legislation, enacted with community involvement and support, can, on the other hand, have a positive effect. As the *Lancet* pointed out in a 1978 Editorial:

" Public-health legislation and related measures have probably done more than all the advances of scientific medicine to promote the well-being of the community in Britain and in most other countries. "[2]

This awareness of the important role of health legislation in international public health was clearly recognized by the founding fathers of one of WHO's predecessor organizations, the Paris-based Office International d'Hygiène Publique. In the diplomatic agreement signed in Rome on 9 December 1907, the signatory Governments placed great emphasis on the need for the systematic compilation and dissemination of information on laws and regulations in the field of communicable disease control enacted in the different participating States.[3] WHO has remained faithful to this tradition and has endeavoured to systematically compile, process, and disseminate information on all aspects of the legislative responses to AIDS. In doing so, it was in a sense itself responding to the 1985 call by Dr Edward N. Brandt, a former United States Assistant Secretary for Health and a former member of WHO's Executive Board, for an analysis of the " total societal response " to what was then still termed the AIDS epidemic.[4] At that time, the actual amount of legislation on the subject was limited. The sheer quantity of the legislation enacted during the period 1986-1988 fully confirms the validity of an assertion made by Gostin in late 1986:



" In the absence of successful behavioral alteration, or scientific intervention, society is beginning to look to the law. There is increasing pressure on public health officials to mark the gravity of the AIDS epidemic by introducing more coercive measures. ... Such measures [impose] disproportionate restrictions on the liberty, autonomy, and privacy of persons vulnerable to HIV infection. "[5]

Monitoring the global legislative response. By October 1989, more than 70 countries (not including subnational jurisdictions) had enacted or issued some form of legislation on HIV/AIDS. The first jurisdiction to do so was the Canadian province of British Columbia (January 1983), followed by Sweden, Austria, and California (all in March 1983). The primary objective was to make AIDS a reportable/notifiable disease, a traditional response by governmental authorities to outbreaks of communicable diseases. As one of the standard manuals on the subject points out, " [t]he first step in the control of a communicable disease is its rapid identification, followed by notification to the local health authority that the disease exists within the particular jurisdiction. "[6]

In June 1983, the first international legal development occurred, with the adoption, by the Committee of Ministers of the Council of Europe, of Recommendation NO. R (83) 8 to its Member States on " preventing the possible transmission of Acquired Immune Deficiency Syndrome (AIDS)

Table 1
Jurisdictions that have introduced significant legislation on HIV/AIDS
(based mainly on legislative instruments available to WHO/HQ, as of 10 October 1989)

ARGENTINA
AUSTRALIA (plus: all States and Territories)
AUSTRIA
BAHAMAS (?) (text unavailable)
BARBADOS
BELGIUM
BELIZE
BERMUDA
BRAZIL
BRUNEI DARUSSALAM
BULGARIA (text(s) unavailable)
BURUNDI
CANADA (plus: all Provinces and Territories)
CHILE
CHINA
COMOROS
COSTA RICA
CUBA (texts unavailable)
CYPRUS (Sovereign Base Areas)
CZECHOSLOVAKIA (Czech Socialist Republic; Slovak Socialist Republic)
DENMARK
DOMINICAN REPUBLIC
ECUADOR
EGYPT
EL SALVADOR
FINLAND
FRANCE (plus: French Polynesia)
GERMAN DEMOCRATIC REPUBLIC
FEDERAL REPUBLIC OF GERMANY (plus: Bavaria; Baden-Württemberg; Hesse)
GRENADA
GUATEMALA
HONG KONG
HUNGARY
ICELAND
IRAQ
ISRAEL
ITALY (plus: Latium)
JAPAN
JORDAN
KENYA
LYBIAN ARAB JAMAHIRIYA
LIECHTENSTEIN (Swiss legislation)
LUXEMBOURG
MALAYSIA
MALTA
MAURITIUS
MEXICO
MONACO
MONGOLIA
MOZAMBIQUE
NETHERLANDS
NEW ZEALAND
NIGER
NORWAY
PANAMA (plus various subnational jurisdictions)
PARAGUAY
PERU
PHILIPPINES
POLAND
PORTUGAL
REPUBLIC OF KOREA
ROMANIA (texts unavailable)
RWANDA
SINGAPORE
SOUTH AFRICA
SPAIN (plus: Andalusia; Aragon; Asturias; Balearic Islands; Basque Autonomous Community; Cantabria; Castile-La Mancha; Castile and León; Catalonia; Community of Madrid; Galicia; Navarre; Valencia)
SWEDEN
SWITZERLAND
SYRIAN ARAB REPUBLIC
THAILAND
TURKEY (texts unavailable)
USSR (plus: RSFSR)
UNITED KINGDOM (plus: Channel Island; Guernsey, including Alderney, Hern, Jethou)
UNITED REPUBLIC OF TANZANIA (text unavailable)
USA (plus: all States, etc., other than American Samoa)
URUGUAY
VENEZUELA
YUGOSLAVIA

Table 2

Selected jurisdictions in which AIDS and HIV seropositivity are subject to mandatory reporting/notification
(based mainly on legislative instruments available to WHO, as of 13 October 1989)

Jurisdictions in which cases of AIDS (A) and seropositivity (S) are reportable

AUSTRALIA (all States and Territories)

CANADA (A - all Provinces and Territories; S - 7 Provinces)

CHINA

COSTA RICA

CZECHOSLOVAKIA

FINLAND

GERMAN DEMOCRATIC REPUBLIC

ICELAND

JAPAN (all HIV infection)

LIECHTENSTEIN

MALAYSIA

MEXICO

NORWAY

PHILIPPINES

REPUBLIC OF KOREA

ROMANIA

SINGAPORE

SPAIN (Madrid)

SWEDEN

SWITZERLAND

TURKEY (A - yes; S - ?)

USSR

USA (A - all States, except American Samoa; S - 24 States)

VENEZUELA

YUGOSLAVIA

Jurisdictions in which only cases of AIDS are reportable

AUSTRIA

BERMUDA

BRAZIL

BRUNEI DARUSSALAM

BULGARIA

CHILE

CYPRUS (Sovereign Base Areas)

DENMARK

DOMINICAN REPUBLIC

EGYPT

EL SALVADOR

FRANCE

FRENCH POLYNESIA

GREECE

GUATEMALA

GUERNSEY (plus Alderney, Herm, Jethou)

HUNGARY

ISRAEL (plus PCP)

ITALY

JORDAN

KENYA

LUXEMBOURG

MALTA

MONACO

MOZAMBIQUE

NEW ZEALAND

PANAMA

PARAGUAY

PERU

POLAND

SPAIN (Andalusia; Aragon; Balearic Islands; Catalonia)

THAILAND

Jurisdictions in which only cases of seropositivity are reportable

FEDERAL REPUBLIC OF GERMANY (positive confirmatory tests only)

from affected blood donors to patients receiving blood or blood products." This contained the operative provisions in which Member States were requested:

" ...to take all necessary steps and measures with respect to the Acquired Immune Deficiency Syndrome and in particular:

— to avoid wherever possible the use of coagulation factor products prepared from large plasma pools; this is especially important for those countries where self-sufficiency in the production of such products has not yet been achieved;

— to inform attending physicians and selected recipients, such as haemophiliacs, of the potential health hazards of haemotherapy and the possibilities of minimising these risks;

— to provide all blood donors with information on the Acquired Immune Deficiency Syndrome so that those in risk groups will refrain from donating."[7]

Later in the same year, the Parliamentary Assembly of the Council of Europe adopted Resolution 812 (1983) on AIDS, in which it, *inter alia*, drew attention for the first time, at the international level, to the issues of discrimination and stigmatization, and confidentiality, issues that have come to the fore more recently.

According to information available to WHO, the following jurisdictions (Table 1) have now introduced significant legislation on the subject.

In view of the early interest in reporting, WHO has maintained an awareness of the approaches being taken by different countries and jurisdictions to this particular issue. The position at present is indicated in Table 2.

It is important to mention at this juncture that matters that require legislative or regulatory action in some countries may not need corresponding measures elsewhere. For example, there has so far been very limited recourse to legislation in such countries as the United Kingdom and the Netherlands, while no legislation on AIDS has been enacted in, for example, Iceland. Many of the developing countries, including some in the African Region of WHO, have adopted no legislation in this area. In the USA, many of the most fundamental and far-reaching measures have been adopted in the form of guidelines, rec-

ommendations, or the equivalent issued by the Centers for Disease Control in Atlanta. One of the most recent developments of this nature was the issuance, in June 1989, of Guidelines for the Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers [8] In Japan, the Office of Tuberculosis and Infectious Diseases Control of the Health Services Bureau of the Ministry of Health and Welfare has issued Guidelines for the Prevention of HIV Infection in Medical Institutions. These were last updated in March 1989.

In the early stages of the pandemic, legislators and policy-makers were confronted by a vigorous debate, in many sectors of society. The debate involved the media, the general public, religious leaders, practising physicians and specialists in public health, academic and practising lawyers, ethicists, and others. This debate has been carefully monitored by WHO, since it is self-evident that legislation does not emerge in a vacuum and is generally conditioned by the political, social, economic, cultural, public health/epidemiological, and even religious context of the particular country or jurisdiction.

A lucid illustration of the complexity of the situation with which legislators were confronted has been given by Bayer, who recently outlined some of the key questions with which health policy-makers were confronted in dealing with AIDS in the early (and later) stages of the pandemic. These included:

— Should public settings, like gay bathhouses, which facilitate multiple sexual contacts be closed?

— How should those most at risk of HIV infection be discouraged from donating blood?

— How aggressively should antibody testing, under conditions of confidentiality, be encouraged?

— Is anonymity in testing preferable to confidentiality? And, if so, under what circumstances?

— Do unconsented blinded seroprevalence studies represent an unacceptable invasion of privacy? Do they entail an unacceptable limitation on the ability to warn the infected of their infectious status?

— Should the results of antibody tests be reportable — with full identification — to public health officials?

— Should contact notification programs, so central to the history of venereal disease control, be applied to AIDS?

— Are there circumstances when the duty to warn unsuspecting sexual partners should take priority over the duty to protect confidentiality? Under what epidemiological conditions?

— Should prisoners or others in confined settings be subject to mandatory testing?

— Should inmates infected with HIV be segregated?

— Should intravenous drug users be provided with sterile needles even if such a move would be perceived as "weakening" the public health concern about the social impact of drug abuse itself?

— Should public health officials invoking the power of quarantine have the power to control those who are infected with HIV and who willfully and maliciously expose others to risk?[9]

In his conclusion to this important contribution to the literature, Bayer comments that:

"To recognize the extent to which efforts to control AIDS will call forth sharp ethical and social controversies is not, however, the end of the analysis. It is, in fact, just the beginning. Which values — with what impact on the lives of men, women and children, with what implications for democratic social life, with what likely consequences for the further spread of HIV infection — should guide us? This is the question posed for us by ethics in this time of epidemic. This is the question that will demand of us rigorous study and vigorous debate".

In compiling, processing, and disseminating information on the extremely diverse legislative and policy responses to these questions, and other questions that have more recently come to the fore, WHO has been guided by certain premises, including the following:

— the need to maintain complete objectivity in the dissemination of information;

— the need to avoid making or implying any value judgements concerning the validity of particular legislative or, indeed, non-legislative, approaches to a particular issue;

— the need for Member States to

Table 3

List of various GPA statements, etc.

— The Report of the Consultation on International Travel and HIV Infection (Geneva, 2-3 March 1987);

— the Report of the Meeting on Criteria for HIV Screening Programmes (Geneva, 20-21 May 1987);

— the Statement from the Consultation on Prevention and Control of AIDS in Prisons (Geneva, 10-18 November 1987);

— the Report of the WHO Meeting on Criteria for the Evaluation and Standardization of Diagnostic Tests for the Detection of HIV Antibody (Stockholm, 7-8 December 1987);

— the London Declaration on AIDS Prevention (adopted on 28 January 1988 by the World Summit of Ministers of Health on Programmes for AIDS Prevention (London, 20-28 January 1988), jointly organized by WHO and the United Kingdom Government);

— the Report of the Consultation on the Neuropsychiatric Aspects of HIV Infection (Geneva, 14-17 March 1988);

— the Statement from the Consultation on AIDS and the Workplace (Geneva, 27-29 June 1988) (convened by WHO in association with the International Labour Office, Geneva);

— the Consensus Statement from the Consultation on Partner Notification for Preventing HIV Trasmission (Geneva, 11-13 January 1988);

— the Statement from the Consultation on Criteria for International Testing of Candidate HIV Vaccines (Geneva, 27 February - 2 March 1989).

have access to information as soon as possible.

The demand for information has been unprecedented. WHO has, in general, been able to respond in a manner that appears to fulfil the expectations of its Member States.

While WHO has no mandate to impose model legislation, and has generally avoided proposing model texts, the Global Programme on AIDS has not been inactive in addressing issues likely to be helpful to legislators and policy-makers as they examine the need for legislation or for other appropriate action. Table 3 contains a list of various statements, etc.

Particularly interesting is the London Declaration, which includes the following affirmations.

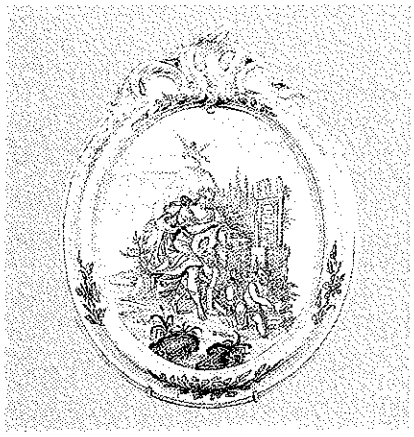
" 5. We consider that information and education programmes should be aimed at the general public and should take full account of social and cultural patterns, different lifestyles, and human and spiritual values. The same principles should apply equally to programmes directed towards specific groups, involving these groups as appropriate. These include groups such as:

— policy makers;
— health and social service workers at all levels;
— international travellers;
— persons whose practices may place them at increased risk of infection;
— the media;
— youth and those that work with them, especially teachers;
— community and religious leaders;
— potential blood donors;
— those with HIV infections, their relatives and others concerned with their care; all of them need appropriate counselling.

6. We emphasize the need in AIDS prevention programmes to protect human rights and human dignity. Discrimination against, and stigmatization of, HIV-infected people and people with AIDS and population groups undermine public health and must be avoided. "

This strong emphasis on the importance of education and information has been echoed in many international and national forums. The purposes of educational programmes are manifold, but certainly one of the most fundamental is to enable all groups and persons concerned to have a full understanding of the pandemic and its causative virus, as well as to modify behavioural patterns, if necessary. It is noteworthy that the Administrative Board of the United States Catholic Conference declared (on 8 December 1987) that:

" ... the best source of prevention for individuals and society can only come from an authentic and fully integrated understanding of human personhood and sexuality, and from efforts to address and eliminate the causes of intravenous drug abuse. We are convinced that the only measures that will effectively prevent this disease at present are those designed to educate and to change behaviour. "





Developments in legislation have obviously been greatly influenced by developments in the biomedical sciences, and in health technology. Thus, without the pioneering work of Montagnier and his colleagues at the Pasteur Institute in Paris, and Gallo and his group at the National Cancer Institute in Bethesda, we would perhaps not have had today methods for minimizing the transmission of HIV through blood and other human tissues. At the same time, the advent of test procedures in early 1985 gave rise to a number of issues and problems that were not fully understood in the very early stages. While there was a strong consensus on the need for testing procedures in order to protect blood supplies, etc., and opinion generally favoured voluntary testing, questions relating to the application of mandatory testing soon came to the fore. In virtually all developed countries today, it is accepted that voluntary testing should be encouraged, where appropriate. A number of countries have promoted the establishment of so-called " alternative testing sites. " It is generally acknowledged that voluntary testing should be accompanied by pre and post-test counselling, under conditions of informed consent and confidentiality or anonymity, depending on the context. WHO has addressed these issues in many statements and declarations. It would be beyond the scope of this paper to review the dimensions of the legislative measures that have been taken in the field of voluntary testing. In this respect, Cates and Handsfield, writing in the United States context, have made the following comment:

" Since the test for antibody to human immunodeficiency virus (HIV)

first became available in the spring of 1985, public health authorities have faced an evolving dilemma of how to use this tool to help prevent the spread of HIV — and ultimately slow the epidemic of acquired immunodeficiency syndrome (AIDS). Virtually no one quarreled with using the test to protect the blood supply. However, the role of testing to prevent HIV transmission by sexual contact or needle-sharing has been a more controversial question. Fears of confidentiality breaches and discrimination against those who were seropositive, or even against those who were merely tested, caused great concern. Some felt the limited resources available for AIDS prevention would have a better payoff if spent on wider community education, rather than personal counselling and testing. Others were hesitant to endorse testing because of problems caused by false positive results in low prevalence populations. "[10]

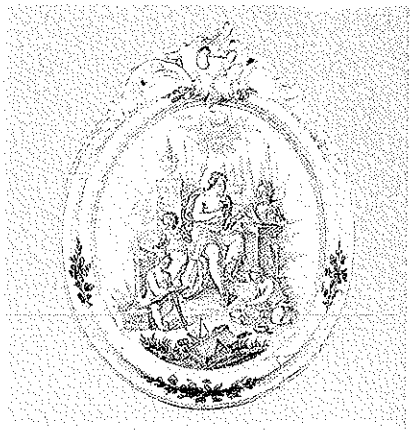
The literature on these and other issues has attained considerable dimensions. Journals devoted to health law, ethics, public policy, and other areas carry reviews and analysis of the issues and dilemmas posed by voluntary (and, even more so) by mandatory testing. This is not surprising if we consider a particularly sagacious observation made by Silverman and Silverman in 1985:

" ... there is no way to simplify the problems posed by AIDS. In keeping the broadest possible perspective and confronting the difficult questions as they arise, we enhance our opportunity to successfully meet the challenges of the most complex health problem of the century. "[11]

A number of countries and jurisdictions have introduced mandatory testing programmes. One country is reliably reported to have instituted a system for the mandatory testing of the entire population. Elsewhere, such measures tend to apply to persons or groups of persons such as:

— intravenous drug users;
— persons engaging in prostitution;
— prison inmates;
— certain categories of military personnel;
— applicants for certain occupations or forms of employment;
— persons convicted of sex-related offences;





— persons applying for a marriage licence;
— foreign students;
— immigrants;
— certain categories of international travellers;
— international short-term travellers;
— persons applying for life insurance policies.

These are, it should be emphasized, only some examples. As regards the implications of some such programmes, WHO has been unequivocal in drawing attention to the inevitable shortcomings, at least at this stage in the evolution of the pandemic. For example, in a 1987 Statement, WHO emphasized that the " HIV screening of international travellers would be ineffective, impractical and wasteful. " It noted that:

" — No screening programme of international travellers can prevent the introduction and spread of HIV infection.

— HIV screening programmes for international travellers would, at best and at great cost, retard only briefly the dissemination of HIV both globally and with respect to any particular country.

— The diversion of resources towards HIV screening of international travellers and away from educational programmes, protection of the blood supply and other measures to prevent parenteral and perinatal transmission, will be difficult to justify in view of the epidemiological, legal, economic, political, cultural and ethical factors mitigating against adoption of such a policy. "

This pronouncement has been endorsed by other international institutions. For example, one of the preambular paragraphs to the " Conclusions of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, of 15 May, 1987, concerning AIDS, " of the European Communities, emphasizes:

" ... The inefficacy, in terms of prevention, of recourse to any policy for systematic, obligatory screening, particularly during health controls at frontiers. "

With the advent of more sophisticated and rapid testing methods, it may be anticipated that the pressure to introduce such programmes may well increase. Another element that may stimulate such a development is

the recent evidence that anti-retroviral therapy with zidovudine may be effective in delaying the onset of clinical symptoms in asymptomatic HIV carriers.

It is evident that some of these measures have entailed some degree of coercion. In a number of jurisdictions, legislation has been introduced to enable the authorities to utilize other coercive measures, for example isolation, in the case of " recalcitrant " persons with HIV infection who consistently refuse to comply with advice or instructions given to them by health care workers. Here, too, there has been abundant analysis of the issues.

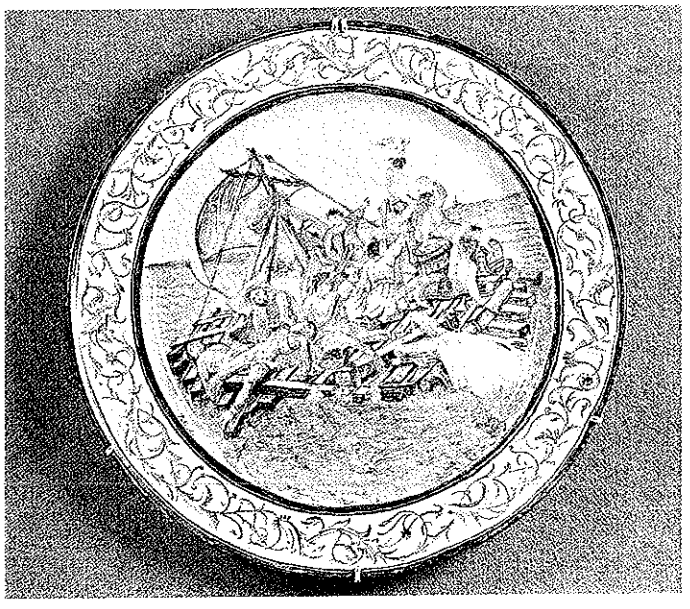
Efforts to prevent propagation of HIV in different jurisdictions have taken different forms, and are, of course, a function of the recognized and well-established modes of transmission of the virus. Some of these measures have addressed sexual contacts. Others have addressed transmission through drug-injecting behaviour. Indeed, in some countries, existing restrictions on access to clean syringes and needles have been liberalized, although clearly this is a matter that remains highly controversial and on which the obtaining of a consensus promises to be extremely difficult. Some jurisdictions have even introduced legislation aimed at preventing the possible transmission of HIV in occupations such as hairdressing and in procedures such as acupuncture.

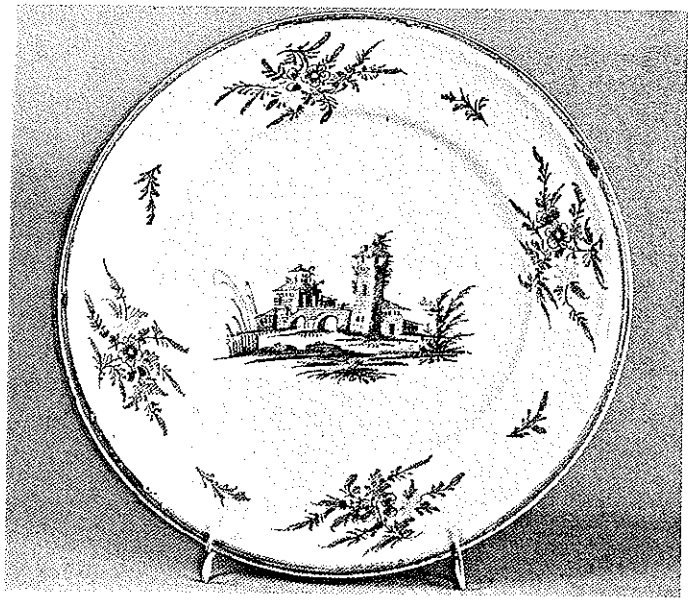
In addressing some of these issues, a particularly judicious comment has been made by Orr:

" In its approach to AIDS and HIV the law has to protect two conflicting interests; it must recognise the right of the public to be protected against the disease and it must recognise the right of the individual not to be unfairly restricted by having or being at risk of the disease. Consequently, the law must make some compromise which while protecting public health also protects the individual so that the individual will feel free to come forward for available treatment. In this way prevention of spread of the disease is encouraged. "[12]

In its Resolution on the fight against AIDS of 26 May 1989, the European Parliament noted, in one of the preambular paragraphs, that " the pursuit of a policy involving sys-









tematic and compulsory screening is ineffective from the point of view of prevention. "

This Resolution, as well as various texts adopted under the auspices of the Council of Europe, focus on many aspects of HIV and AIDS, including issues related to the workplace. One of the key statements that emerged from the June 1988 WHO/ILO Consultation affirms that:

" Protection of the human rights and dignity of HIV-infected persons, including persons with AIDS, is essential to the prevention and control of HIV/AIDS. Workers with HIV infection who are healthy should be treated the same as any other workers. Workers with HIV-related illness, including AIDS, should be treated the same as any other worker with an illness. "

Many countries have introduced legislation or guidelines on HIV/AIDS in the workplace, both in general and with particular reference to hospitals, laboratories, etc. where transmission of the virus may be a real, even if only extremely minor, hazard. A review of national measures in this area has recently been published by a staff member of the International Labour Office,[13] while the relevance of international labour standards has been examined elsewhere.[14]

Some emerging issues

Reference has been made to the London Declaration of January 1988. Its provisions on discrimination have been endorsed by the supreme governing body of WHO, the World Health Assembly. On 13 May 1988, the Forty-First World Health Assembly adopted a resolution (WHA41.24) on " Avoidance of discrimination in relation to HIV-infected people and people with AIDS. " This urged Member States, particularly in devising and carrying out national programmes for the prevention and control of HIV infection and AIDS:

" 1) to foster a spirit of understanding and compassion for HIV-infected people and people with AIDS through information, education and social support programmes;

2) to protect the human rights and dignity of HIV-infected people and people with AIDS, and of members of population groups, and to avoid discriminatory action against and

stigmatization of them in the provision of services, employment and travel;

3) to ensure the confidentiality of HIV testing and to promote the availability of confidential counselling and other support services to HIV-infected people and people with AIDS;

4) to include in any reports to WHO on national AIDS strategies information on measures being taken to protect the human rights and dignity of HIV-infected people and people with AIDS."

It seems likely that the next "-wave" of legislation may well focus on issues relating to discrimination and stigmatization. In July 1989, WHO, in conjunction with the Geneva-based United Nations Centre for Human Rights, organized an International Consultation on AIDS and Human Rights, convened in Geneva on 26-28 July 1989. The participants recommended, *inter alia*, that:

"Governments ensure that measures relating to HIV/AIDS and concerning persons already infected conform to international human rights standards, and that they re-examine the measures already in force for the protection of human rights in the light of the particular issues raised by HIV/AIDS."[15]

Other aspects addressed by legislation

In this paper, space constraints do not enable coverage of other issues addressed in legislation that has now been communicated to WHO in this field. For example, there are legislative texts which deal with such aspects as:

— the rights and obligations of persons with AIDS and HIV-infected persons;

— the payment of compensation to HIV-infected haemophiliacs and other persons who have contracted infection as a result of blood transfusions;

— recognition of HIV infection as an occupational disease subject to compensation;

— liability on the part of blood banks for HIV infection contracted in the course of blood transfusion procedures;

— the care of AIDS patients and other persons suffering from HIV infections;

— the reimbursement of the cost of the (currently very expensive) drugs available for treating particular manifestations of and infections associated with AIDS;

— limitations on the prescribing of zidovudine;

— measures intended to minimize legal obstacles to the development of HIV vaccines;

— the establishement of national AIDS commissions, committes, and the equivalent.

Concluding observations

In recent paper published in a WHO journal, Connor analysed the following four key questions arising from the social, humanitarian, and legal aspects of AIDS:

— What is the best public health approach to people with HIV/AIDS, and what rights should they have?

— Who should be subjected to mandatory testing?

— Who has a right to know or be warned if someone has HIV/AIDS?

— How can society be protected against people who irresponsibly or deliberately set out to infect others?

The conclusion of Connor's analysis is that "as recommended by the World Health Organization, policies which balance concern of public health with respect for individual rights are both the most humane and the most effective way to control the spread of AIDS."[16]

It is still too early to say, with any degree of certainty, whether legislation on HIV/AIDS will play a critical role in preventing the further spread of the pandemic, though in many countries it will remain an essential element in executing and enforcing policy, and for providing the necessary funding for programmes and activities. Countries can and do learn from each other's experiences — both positive and negative — in this area, as in other areas of health. WHO will continue to play its catalytic role of fostering the international exchange of information on HIV/AIDS legislation. The Global Programme on AIDS will pursue its proactive role, developing consensus statements and the equivalent on issues of current concern or on emerging or anticipated issues. In doing so, it will enable policies and legislation to be conceived and formulated that are in harmony with the letter and the spirit of the Global AIDS Strategy.

[1] CAMUS, A. *La Peste*. Paris, Gallimard, 1947, pp. 54-55 and *passi*,.

[2] *Lancet*, 2: 354-355 (1978).

[3] *Bullettin de l'Office International d Hygiène Publique*, 1909, No. 1, p. 3.

[4] BRANDT, E. N. *Annals of Internal Medicine*, 103: 771-773 (1985).

[5] GOSTIN, L. O. *Hastings Center Report*, December 1986 (Special Supplement), p. 29.

[6] BENSON, A. S., Ed. *Control of Communicable Diseases in Man*. 14th ed. Washington, DC, American Public Health Association, 1985, pp. XXI-XXII. AIDS and HIV infection are, however, not among the diseases that are required to be reported to WHO under the International Health Regulations (1969) (Third Annotated Edition, 1983) or subject to WHO surveillance in accordance with procedures established by the Twenty-second World Health Assembly.

[7] All significant items of legislation on the subject, as well as relevant instruments emanating from international organizations, have been covered, either *in extenso* or in summary form, in the WHO quarterly journal, the *International Digest of Health Legislation* (and its French-language counterpart, the *Recueil International de Léglislation Sanitaire)*. In addition, WHO has issued, and regularly updates synoptic information on this subject. See *Tabular Information on Legal Instruments Dealing with AIDS and HIV Infection (Part I. All Countries and Jurisdictions Including the USA (Other than State Legislation))* (document WHO/GPA/HLE/89.1, May 1989). Many of the most significant legal texts have been reported (in English) in the following source: *Legislative Responses to AIDS*. Dordrecht, the Netherlands, Martinus Nijhoff Publishers, 1989.

[8] *Morbidity and Mortality Weekly Report*, 38(S-6): 1-31 (1989).

[9] BAYER, R. *AIDS* 2 (Suppl. 1): S217-S221 (1988).

[10] CATES, C. and HANDSFIELD, H. H. *American Journal of Public Health*, 78 (12): 1533-1534 (1988).

[11] SILVERMAN, M. and SILVERMAN, D. Cited by Hauserman, J. in "Ethical and social aspects of AIDS in Africa" (unpublished background paper commissioned by the Commonwealth Secretariat for a meeting of Representatives of the Member States of the West African Health Community, Lagos, 12-15 June 1989).

[12] ORR, A. *Journal of Medical Ethics*, 15: 61-67 (1989).

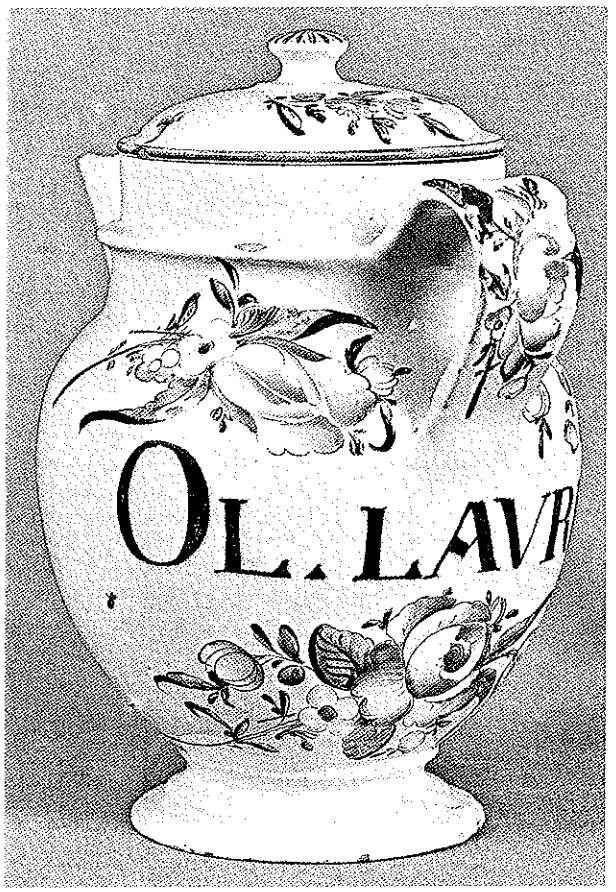
[13] WIDDOWS, K. *International Journal of Comparative Labour Law and Industrial Relations*, 4(3): 140-162 (1989).

[14] TREBILCOCK, A. M. *International Labour Review*, 128(1): 29-45 (1989).

[15] See United Nations document HR/AIDS/1989/3 (available in English and French).

[16] CONNOR, S. S. *Bullettin of the Pan American Health Organization* 23(1-2): 95-107 (1989).

Round Tables



Rights and Duties
Care-Related Problems
Family and Society

Rights and Duties of the Person, the Community, and Institutions

Professor CESARE MIRABELLI

1. This contribution has the sole aim of pointing out certain points of orientation and seeks to stimulate common reflections on a very broad theme, in which there converge and overlap needs of the person, interests of the community, and interventions of institutions in both a national context and one which is above the national level.

For this reason there will be an identification of the relevant themes and indications regarding the prospects for a solution of the different questions involved; while each assessment is intended to be integrated into the following contributions and only aims at offering a contribution for further and more exhaustive treatments of the subject.

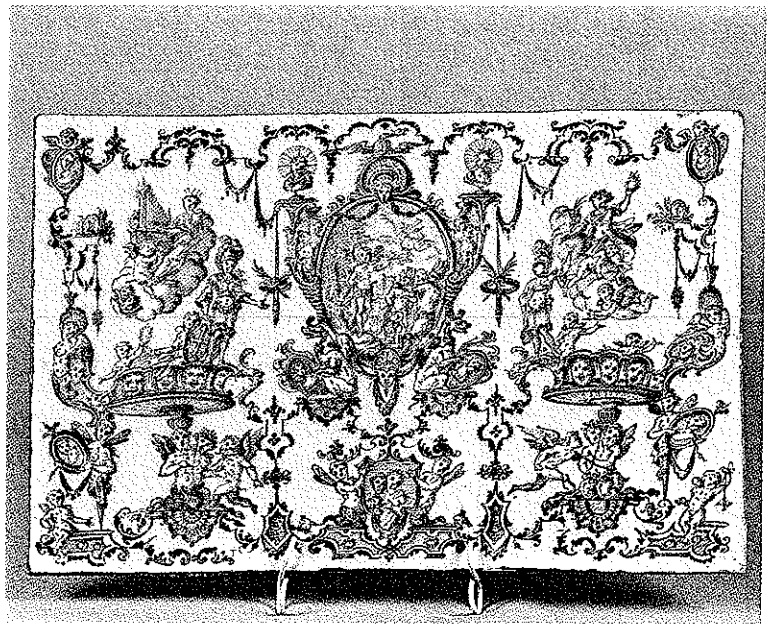
The legal problems which arise when one is dealing with the illnesses of man impinge on questions that concern, from a subjective point of view, the individual and his rights, his relationship to other subjects in the private sphere, his relationship with the community and with collective interests, and his relationship with institutions and with the weight of authority that they express.

These are not new problems. They are anchored in general principles and fundamental rights. For them, moreover, one can refer to patterns of relationships, organisation and interventions which have long been used for other infectious diseases, now contained, if not eliminated, but at one time present and dangerously diffused.

However, because of the original characteristics of this disease, AIDS at times poses old problems in a new way. Another reason for this is to be found in the long period of incubation of the disease and the different possible forms of development of seropositivity. Under this heading the need to tackle the spread of the disease by preventing its outbreak through a control of the categories at risk; with education regarding correct forms of behaviour in health terms; through the provision of effective therapies to whoever is affected but at the same time safeguarding the dignity and the rights of the person, even during the terminal stage of the illness, are all new.

At the centre of every reflection, including that directed towards an analysis of institutional aspects, there is always the person, both in the importance of health and the need to achieve its protection, and in the importance of the illness and the need for treatment and protection in accord with his fundamental rights.

2. In contemporary legal experience there has been a progressive affirmation, in the area of the fundamental rights of the person guaranteed by the laws of states, often in written constitutions and in the catalogue of rights protected by international conventions, of the right to health. This is conceived both as a right of the individual to a standard of life sufficient to guarantee such health or a right



to enjoy the best conditions of physical health, and as a right to necessary medical treatment with the corresponding duty of institutions to provide preventive treatment, treatment, and control of epidemic diseases, and the creation of conditions which guarantee medical services and necessary health care to everybody (Universal Declaration of Human Rights, art. 25; Treaty on Economic, Social and Cultural Rights, art. 12).

Just as widely guaranteed is the relationship between the freedom of the person and health treatment, at least with regard to a prohibition of subjecting the person without his free consent to medical or scientific experiments (Treaty on Civil and Political Rights, art. 7), or rather, according to wider and more comprehensive formulations, with the envisaging of restrictions regarding compulsory health treatment, which can only be legitimately imposed in the interests of the individual for essential requirements of the community, and whatever the case, always with respect for the dignity of the human person (ex., Italian Constitution, art. 32).

The construction of fundamental rights, and amongst these the right to health, envisages a relationship between freedom and authority, between the individual and public powers, and the identification of situations of guarantee through the abstention of public interference from the sphere of the person; or rather shapes situations of claims on the part of the person who has the right to services for the satisfaction of a personal need - in our case health services which directly or indirectly must be guaranteed by the public powers.

It is appropriate, with reference to the fundamental rights of the person recognised by contemporary legal experience, to direct attention towards:

a) the legitimate claim of those who are ill with AIDS to receive medical care which is suitable to their condition;

b) the interest of those who are in conditions at risk in suitable preventive treatment and control of the disease.

Conversely, one can call attention to the duty of states:

c) to supply, in a direct fashion, the health services which are necessary for the ends indicated in points a) and b);

d) in an indirect fashion to adopt measures to ensure the control and monitoring of the disease and research for suitable therapies. This can be done by encouraging co-operation between states and relevant international organizations.

The vision of fundamental rights, even though rich in perspectives by which to define the right of the person and for the definition of the duties of institutions, does not, however, include the entire horizon of the legal and institutional problems which are linked to the forms of diffusion of AIDS.

The vision of fundamental rights serves, rather, to concentrate attention on the basic objectives: the protection of the right to health of the person and to the dignity of the individual even in a state of illness; the power and the duty of institutions to guarantee — in a direct or indirect fashion — that such rights are satisfied, in the interest, first of all, of the individual, and, therefore, of the collectivity.

3. A large area of problems connected with AIDS is to be found in the realm of interpersonal legal relationships and thus in the sphere of the rights of private citizens.

An initial classification can include and detect the following problems:

a) relationships in the realm of the familial community and in its formation;

b) relationships between people in the realm of general relationships;

c) relationships in the realm of the community in which the social dimension of the person is usually expressed (school, work);

d) relationships in the realm of situations of forced cohabitation in controlled communities: because of the activity involved (military institutions); because of the state of the person (hospitals), or because of legitimate restrictions on personal liberty (prison institutions).

In all these cases a factual ascertainment and a reference to certain general principles appear to be important.

Under the heading of factual presuppositions, the following characteristics of the malady must be borne in mind: the long time that the disease takes to manifest itself, the condition of seropositivity, the methods of transmission, the conditions at



risk, and what medical science and its advances allow us to know about the characteristics of the disease, its treatability, and the risks of contagion.

Under the second heading, it must be remembered that in the life of the relationship every act of the person is an expression of his freedom, but, at the same time, a source of his responsibility. The injury of the right of another dictates that the act is wrong and determines the legal responsibility of whoever has maliciously and culpably carried it out. The right to be treated, in particular, is symmetrically balanced by the duty, which applies to the same person, to not infect others.

At the base of every further consideration there is the right to be informed and the duty to be informed about one's own conditions of health, on the state of the illness, on the forms of contagion and on the risks of diffusion; and consequently upon the forms of behaviour which are to be avoided so that one's own health or the health of other people is not put in jeopardy.

There is, therefore, a duty to inform, and this is a function of prevention in the situations at risk and contagion. The obligation to inform takes precedence over the right to privacy, but this, however, does not extend to a general duty to make one's own conditions of health and malady known to everybody (and, therefore, to make them potentially well-known), but more restrictively it imposes the duty to inform those people with whom the nature of one's relationship and the forms it takes can determine the risks of contagion.

In the area of the family the state of being ill requires to no lesser extent, and indeed exalts, the duty of natural solidarity and care which by its nature is linked to a general or specific state of need in the context of mutual help which characterises the familial community. Indeed one should add the duty of society and institutions to support the family in its fulfillment of this task with economic and health care measures which are necessary and adequate so as to face up to a situation of such marked difficulty.

Care, especially of those who are seropositive, in the family context does not lessen the duty not to impair, in the same context, the health of the spouse or of the family relations and, therefore, to effect all the precautions directed at excluding and preventing contagion.

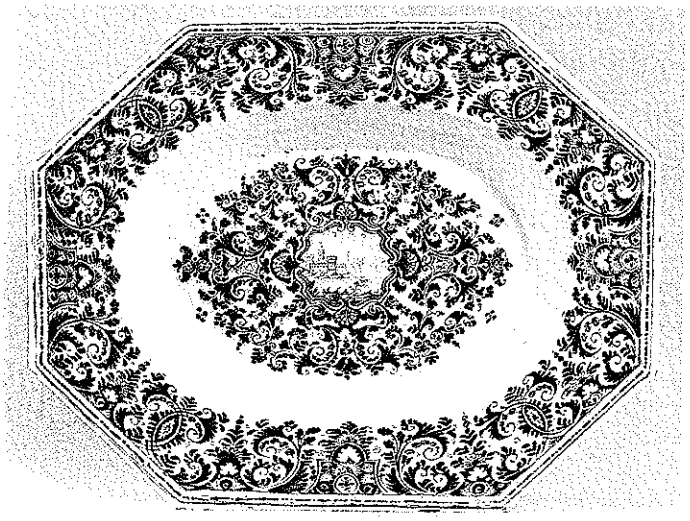
With regard, then, to marriage in its genetic importance, its formation, there is no possibility of detecting any inability to form it because of an ascertained malady, but there is certainly a duty concerning suitable information so that consent of the other party can be knowingly and validly given.

Questions regarding responsibilities towards procreation, to which only a reference will be made here, present greater difficulties for analysis.

Any form of exclusion or marginalisation in the common area of relationships which is linked to the state of being ill does not appear to be legitimate. But the right not to be 'excluded' is balanced by the duty not to cause injury, that is to say the duty not to bring about situations or practice forms of behaviour which are favourable to contagion. Because of this one can also affirm the duty to provide information about the state of being ill and of the consequent dangers for those who are placed at risk in virtue of the relationship. The failure to observe this duty is a source of responsibility according to general norms, even from a civil point of view, for the injury that is caused to others. However, the identification of the act and the injurious deed appear difficult, also in terms of time

In the realm of the community in which the life of relationships proceeds stably the duty to inform and the power to ascertain are commensurate with the situations at risk. However, medical visits for the purpose of a check-up and imposed burdens which are suitable for the creation of an instrument of indirect compulsion, which would create a voluntary subjection to controls with the prospect of obtaining advantages and authorisations, can, however, be envisaged This appears legitimate as long as the means to this end are suitable and the dignity of the person is respected with regard to the forms of ascertaining and the privacy of information.

The situations of necessary co-habitation in controlled communities all present a common feature, and this is a most incisive presence of the



weight of authority, which superimposes itself on the interpersonal relationship.

The obligatory character of cohabitation can impose more specific duties of control, prevention and therapy on the part of those institutions that govern this cohabitation and have the role of protecting and guaranteeing the physical integrity and health of those who are subjected to the obligation of cohabitation, and to do this for its duration.

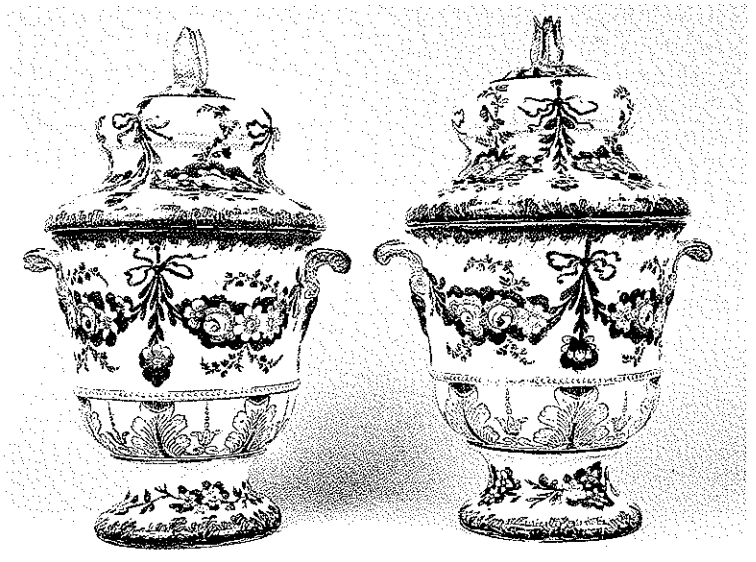
But the differences among situations are also obvious.

In the health care institutions the aim of the voluntary limitation of the liberty of the person is treatment the subjection of the ill person to therapy usually occurs on the basis of informed consent. The obligatory character of the therapies, which is always seen with understandable disfavour, not least because of the dramatic nature of previous experiences, wherever it is envisaged can only be used in conjunction with general normative principles and when there is an absolute need to guarantee public health and no other suitable instrument is available.

The adoption of measures of specific prevention of contagion according to criteria that science and health technology suggest and impose, on the other hand, appear obligatory. And this as much to protect other patients as for safety of all those who are exposed to risk for professional reasons as they carry out their inescapable duty to offer care.

With regard to prison institutions in which cohabitation is still more absorbent and coercive, to the possible prevision of a generalised model of diagnostic assessment for the protection of the same principles, is added the duty of insuring conditions of life which allow the treatment of those who are afflicted by illness and provide a guarantee against the risk of contagion to those who are confined to a state of detention, yet assuring conditions of personal dignity to all The individual requires greater treatment and protection exactly when such dignity is placed at further risk because of such conditions.

4. The sphere of private rights does not exhaust the panorama of legal problems linked to AIDS.



There are headings that can touch penal rights, in so far as they can be foreseen, beyond the prevision of special categories of crime, sanctions for the possible injuries that intentional or culpable contagion can determine, or because of the non-observance of cautionary measures for the prevention of the contagion itself. A specific paper is dedicated to these themes.

Other problems are present in the discipline of public intervention; it is right to ensure treatment and guarantee opportune protection.

In this context the most specific problem is that of controls and health assessments which aim at prevention and identification of the carriers of the disease: this poses a problem of organization — that is to say, the prearrangement of necessary measures of health protection — which leads back to the area of the right and proper acts of the state.

It also poses the problem of the legitimacy of the subjection of the person to health assessments. Under this heading, if consent and the voluntary subjection to controls must undoubtedly be encouraged, especially with regard to the categories exposed to risk, the obligatory character of these same controls cannot be excluded, accompanied by forms of indirect control. This makes health controls an essential responsibility for the achievement of public services, the use of services, or authorisation for the carrying out of activity in which the state of health is important.

It should also be remembered that the framework of the obligatory nature of controls has been followed for some time for other contagious diseases and that it can be put into effect with respect for the dignity of the person and the requirement to respect the privacy of assessments.

General questions which touch upon health care organization in its entirety, scientific research, and international cooperation, do remain. But these problems, even though they render intervention necessary, do not seem to present themselves in forms which are different in legal terms from past experience: they raise problems of quantity, intensity, and co-ordination of effort, rather than the legal configuration involved.

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AIDS and Professional Secrecy

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1. Introduction

In this fourth international conference, which has been so perfectly organized by the Pontifical Council for Pastoral Assistance to Health Care Workers, I have been asked to speak on AIDS and professional secrecy within the framework of the rights and duties of the individual, the community, and institutions.

I think that it is most appropriate that this subject should be considered, especially because the Catholic literature devoted to professional secrecy and AIDS is very scant. The Catholic moralists who have written on AIDS offer very brief and undetailed references on the matter. The publications of the Magisterium offer us texts which are important and sound, but also brief. This relative lack of material can be explained in two ways: the idea that a general moral discussion of the subject involving very wide and imprecise features suffices to clarify this particular situation, and the interest concentrated upon other problems concerning AIDS which are indubitably more pressing.

2. Some clarifications

Before continuing with this paper I would like to make some clarifications with regard to the area of my contribution.

I make large use of the word AIDS: I use it both in its true sense — where the disease is already evident — and for any case of HIV infection. This does not mean there are no differences among the different stages of the illness with regard to secrecy. For example, it is more difficult to hide AIDS when it is in an advanced state. Equally, the consequences of a violation of secrecy can be more serious when there is a carrier rather than when there is someone ill with AIDS, etc.

The term *professional* refers to all those who come to know about someone afflicted with AIDS because of their profession. It is superfluous to say that the professions most directly and most frequently involved are the health care professions.

The subject will be considered from an *ethical* and not a legal point of view, in a fashion true to the Christian tradition.

My contribution will address itself above all else to *our sociocultural context*, but the validity of this discussion is not to be precluded for other cultural situations.

Finally, one is not dealing with the conduct to be followed towards those who are victims of AIDS — whether to tell or to conceal the truth. My intention is to dwell upon the duty of revealing or hiding the situation from *third parties*, individuals, or institutions.

3. The high moral value of professional secrecy

Minority ideologies attack professional secrecy as an archaic practice good only for the times of shameful diseases — times which are by now considered outdated. Notwithstanding certain unsatisfactory aspects which are sometimes linked in part to professional secrecy — the difficulty of a better control of the social services, the obstacles to more transparent information, and a somewhat individualistic vision of man — the majority of people do not think that these points are sufficient to consider that secrecy is a suspect value which could be forgotten or eliminated.

On the contrary, the Christian conscience, and more generally even the human conscience, consider professional secrecy a high moral, individual, and social value. It is called for by the dignity of man, by his autonomy, of which it becomes a sign. On the other hand, secrecy appears as being linked to the growth and the well-being of the individual. Without such secrecy relationships such as trust, friendship and love, which are of such great importance in social and personal life, show themselves to be very difficult.

AIDS has brought other aspects of professional secrecy to the fore. Christian circles, as well as professional and political organizations, in general agree in asserting that secrecy is an important and necessary measure to ensure that the human person afflicted by HIV is not stigmatised, marginalised, or discriminated against.

Secrecy is also recognised as being an effective guarantee in the fight against AIDS. Counselling and voluntary tests are considered as essential measures in the containment of the epidemic. And there are good reasons to fear that without the protection of secrecy many people at risk will refuse to seek the advice of a doctor or take measures which are necessary to avoid the infection of others. Very often, outside the sphere of the Church, moral arguments are encountered which place too much emphasis on the health value of professional secrecy and on the meaning that it has for public health, and this brings the real danger that the

personal value of secrecy will be concealed.

Despite these differences, and even if some of the motives do not always coincide, there is agreement on the fact that respect for secrecy must be the norm but that disclosure must be the exception. As applied to AIDS this thesis is usually accepted by our contemporaries.

4. Professional secrecy is not an absolute value

What has been defined with evident exaggeration as the " Universal Declaration of the Rights of Those Ill with AIDS or Those Who Are Seropositive " affirms in article 10: " Medical secrecy, which links doctors and the doctor to his patient, must be absolute and without any exception. " This claim, which is understandable from the point of view of those who feel threatened by the risk of being stigmatised and marginalised, does not take sufficient account of the other relevant values which can, and at times must, take precedence over secrecy.

In an enlightened and detailed discussion it is not to be imagined that secrecy could be made an absolute value. But in the same way we must avoid the easy risk of increasing the number of exceptions. The *situations* where professional secrecy can come into play are many and varied. They increase above all else in the field of health: to reveal or conceal the situation to the health authorities, or to the professions of health care — surgeons, general practitioners, dentists, laboratory workers, first aid services, death certificates, blood and sperm banks, etc.

It has been asked whether, in the case where a seropositive person is a health professional, he must hide this circumstance from his patients.

Outside the health environment there are other possible receivers of the disclosure of the secret: sexual partners, insurance companies, firms, schools, courses, the police, the Press (here one can remember the case of the News of the World).

If we ask ourselves what are the *values* involved with regard to the concealing or revealing of the HIV infection to third parties (people or institutions), we must first of all consider the infected person, whose dignity, autonomy, and good name will probably be damaged. The right of the human being not to be marginalised and discriminated against is threatened in many areas of life: accomodation, work, medical treatment, insurance, teaching, etc. And to a certain extent all these effects will also fall on the family.

On the one hand the common interest of society, in certain circumstances, seems to make the breaking of secrecy acceptable, where there is the aim of guaranteeing public health, or more rarely, in the name of the liberty of information, the freedom of the Press. On the other hand, the same common interest most of the time seems to require a sacred respect for secrecy as a general principal. If secrecy is not guaranteed by ethics or even by the law, one must fear an easier diffusion of AIDS, and this because of the reticence on the part of people, at risk to take a test or accept voluntary counselling.

Finally, there are also the legitimate interests of those third parties who are more or less threatened by loyalty to professional secrecy: the sexual partners, for example, of seropositive people who have no reason to suspect the realities of the situation.



The privatist schools of thought, although they recognise that an inferior value is involved, refer to economic interests.

All these values do not enter into play in every situation or, above all, to the same extent. In so far as is possible, one should identify, therefore, all the values involved. This presupposes the fullest possible analysis of the situation so as to not leave uncovered any important elements for the formation of a moral decision.

Furthermore, one should clarify, as far as possible, the level of probability or certainty both of success for the objectives sought and for the risks to avoid.

Loss of secrecy must only occur as a last resort, when there is a lack of other alternatives which could more effectively balance all the values that are at stake.

In the rest of this paper I will dwell upon what is considered the most difficult case and what provokes the greatest differences of opinion.

5. The case of the sexual partner

Even if the references of moral theologians to this situation are very rare and brief, I think one can detect a clear tendency towards *disclosure as a norm* in this specific case. However, I have the impression that the opinion prevails that disclosure must rather be the exception, and that this is so especially in medical circles.

Catholic writers who expound the duty of the professional to inform the sexual partner are of this opinion when certain conditions are met.

a) The refusal of the ill person to inform his partner.

The duty to reveal the circumstance of the infection belongs, in the first place, to the person affected by HIV. The duty of the professional should be only vicarious and substitutive. It is obvious that the professional must remind the HIV carrier or the ill person as to his duty and encourage him to discharge it. And one can hope that with adequate counselling cases of refusal will be rather rare and that this situation, which is so embarassing for professionals, will be mostly eliminated.

b) If the professional is aware of the fact that the partner himself is infected and that he is a person at risk, or if the professional has reasons to suspect that there has been a possible infection of the other person, his duty ceases to exist.

c) Apart from the cases described above it is necessary to measure the level of risk of infection for the endangered partner. Authors do not agree about measuring the risk run by the sexual partner. On the other hand, one should not forget that the good which is in danger in our case is, in a certain case, life. A small risk with a major injury is less easily tolerated than a major risk with a small injury.

d) The duty can be applied only to identifiable sexual partners or to partners who can be reasonably contacted.

When these conditions are present, Catholic authors defend the duty of the professional to alert the sexual partner. Some non -Catholic authors propose that other conditions must be present before the obligation of the professional can be upheld: that the two partners are patients of the same doctor, that the professional in his practice is not directly and immediately engaged in the fight against AIDS, and that they are married people and not people living together or people having occasional sexual relationships. I believe that from a moral point of view these conditions should not be respected.

Those who uphold the duty of revealing the situation to the partner justify their position on the basis of a conception of the human person and his relationships with society. Although they recognise the social character of the human being, they maintain that one cannot impose on anyone the obligation to accept the risk of their own life, with the exception of engagements freely undertaken in the world of certain professions. In this situation one could not invoke the principle of totality.

Faced with this position, which is upheld in Catholic circles, others think that in the case considered the norm should be secrecy and the duty to disclose, the exception. To uphold this thesis appeal is made to two reasons.

First, the very low risk of infection in the relationship of a couple, whether married or cohabiting. But the reason most commonly mentioned concerns the requirements of the common good: the protection of public health. As I have already said, counselling and voluntary tests are considered basic elements in the fight against AIDS. Now, if it is maintained that there is a moral (or legal) duty on the part of the professional to alert the sexual partner, many argue that there will be many amongst the groups or individuals at risk who will not ask for counselling or the test, and that this will constitute an increasing danger for public health. These authors believe that the risk for the sexual partner is the sad but necessary price that is paid to avoid a wider diffusion of the disease. But this utilitarian vision is not shared by the Catholic authors.

Apart from the case of the sexual partner, where the divergences of opinion are most distinct, in most of the other situations a stronger amount of agreement is present.

The position to be adopted towards professional secrecy could be modified by the evolution of the features of AIDS. In fact, this disease is linked with a more or less probable threat of death. In addition, it is transmitted, amongst others, by ways (homosexuality, drugs) which have a widely diffused bad social image.

This disease, finally, is accompanied by an epidemic of social reactions: an ill-founded fear of easy contagion, stigmatisation, marginalisation, and discrimination. If these medical and social facts change, as can be hoped, the positions on professional secrecy will also in some respects probably change.

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AIDS and Penal Institutions

PROFESSOR ERNESTO UGO SAVONA

Introduction

The problems concerning the 'rights' of those ill with AIDS in relation to society, and their 'duties' in avoiding the transmission of the infection, have been considered in terms of the health dimension to social safety but considered very little from the legal point of view. Because the person is ill, people prefer to consider the responsibility of the carrier of the HIV virus in predominantly moral terms.

The development of AIDS, which is often caused by irresponsible forms of transmission of the virus to unknowing victims, has posed the question of its penal control. In certain countries the necessity and the possibility of in some way criminalising such irresponsible behaviour are gaining support; as is the attempt to make the HIV test obligatory for certain categories at risk such as, for example, those in prison institutions. In both cases one is dealing with a delicate sphere because, from many points of view, the difficult question remains as to whether, and in what ways, penal law, and more generally the system of penal justice, should seek to deal with a health problem.

The positions can be summarised in the following fashion:

Those who favour penal sanctions and consider them as the only effective deterrent by which to protect society against the spread of the virus by conscious carriers who practise forms of behaviour which are dangerous to public health. Two premises characterise this position: the fact that education in relation to this kind of conduct does not work, and the right of society to stop these people from continuing to endanger its health.

Those who are opposed to the use of penal sanctions. For those of this point of view penal sanctions have no deterrent effect in controlling the diffusion of the infection. Indeed, the fear itself of incurring penal sanctions could discourage people from submitting to the test. Furthermore, acting penally against the carriers of the HIV virus would entail the acquisition of proof as to the malice or the guilt of their behaviour, and would raise questions of a constitutional nature.

With regard to the obligational character of a test for certain categories at risk — something that has already been put into practice in the United States — the advanced state of the programmes and the successful results which have been obtained have overcome the criticisms that exist. The danger is that the obligatory test will be extended to further categories of subjects: homosexuals and drug users. This would amount to a mass registration of behaviour towards which a high level of toleration has been reached.

This paper examines (with reference to the American experience) the tendency to use penal legislation against carriers of the HIV virus and the obligational aspect of a test for certain categories at risk. There will then be a discussion of the nature of this tendency, its practicability, the legal *'factispecies'* which are employed and the extent to which they are adequate to prevent such a very special phenomenon as the diffusion of AIDS. Finally, there will be presented the first evaluation yet made as to the extent to which an extension of penal control in this delicate area is opportune and practical.

The factispecies of offence which are utilised

Limited experience of the criminalisation of HIV carriers who have knowingly or carelessly exposed other victims to infection prevents us from outlining a definitive overview of the legal *factispecies* which have been used by the courts for their decisions. In the past and still today resort is made by analogy to other *facti species* regarding criminal acts. But a tendency is developing towards the creation of *ad hoc* penal legislation.

With reference to traditional legislation, the prosecution has employed a series of options from different offences depending upon the different facts of the case: *murder, attempted murder, injury, sodomy, exposing other people to infectious diseases, prostitution, and the use or illegal sale of state controlled substances such as syringe needles*. The use of these *factispecies* tends to vary according to the attitude and legislation of each State. The use of especially grave *factispecies* has been in actual fact limited to very few cases, because of the very great difficulties for proof which are encountered in the courts.

A) *Murder*: the use of this *factispecies* needs:

1) Proof that the accused was an HIV carrier. This requires that the prosecution can prove that the accused was afflicted with AIDS at the time of the indicted behaviour. This can be done by means of a declaration of the subject himself or with medical proof. When these two possibilities are not available the prosecution can oblige the accused to undergo a test and it can then prove,

using other circumstances, that the accused was afflicted with the virus at the time of the indicted behaviour. These kinds of proof are difficult to obtain.

2) Proof that the accused was the cause of the transmission of the virus to the victim. The causal element constitutes a notable difficulty because the prosecution must prove two facts: firstly, that the victim had not already been infected by the virus prior to the behaviour of the accused; secondly, that the victim did not receive the virus by some other means or from another carrier. It is precisely the difficulty of proving the causal element that has led the prosecution in some cases to prefer the *factispecies* of culpable murder to wilful murder.

3) The proof of *mens rea*. In this case as well the difficulty of proof regarding the knowledge of being afflicted with AIDS and of wanting to cause the death of the victim by transmitting it to him, has led the prosecution in some cases to prefer the *factispecies* of culpable murder to wilful murder.

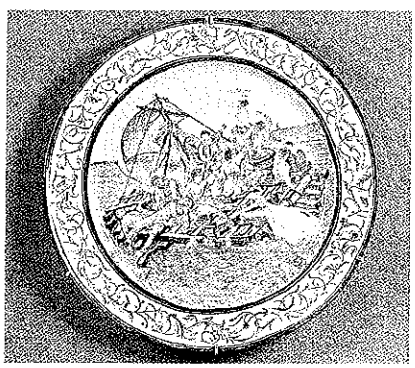
B) *Injury*. This *factispecies* is broader in scope and presents less difficulties for legal proof than the previous examples. There is, however, the problem of the consent of the victim — a frequent problem in the case of transmission through sexual intercourse — and this has produced opposing decisions by courts dealing with cases of this character.

C) *Exposure of the victim to contagion*. This is a *factispecies* which is often used for the penal control of the transmission of venereal diseases. It has acted principally as a symbolic support for other nonpenal forms of regulation, such as compulsion in the cases of quarantine, vaccination, or other forms of medical treatment, which are commonly used to combat infectious diseases with a high risk of contagion. In this case as well certain kinds of proof are necessary, and they are often not considered sufficient in the courts.

D) *Prostitution*. A greater penal control of prostitution could have an indirect advantage with regard to the spread of AIDS, given that it is precisely in this population that the highest probability of diffusion is to be found.

E) *Illegal use of hypodermic needles*. Given that the exchange of infected syringes between drug users is a frequent vehicle for the transmission of the AIDS virus, it is thought that the prohibition of their illegal sale could reduce the diffusion of the virus. This is a difficult assertion because it is precisely the application of a law of this kind which could increase the spread of AIDS - by compelling an increase in the exchange of infected syringes. Experience of the free distribution of syringes in Holland or their greater availability in a large number of shops have led to a reduction in the diffusion of the virus.





2. New penal legislation

The use of present legislation has shown itself to be inadequate. For this reason certain States of the United States have created or are creating laws which are specifically directed towards avoiding the diffusion of the virus.[3]

The area affected by these laws is highty varied. Certain States provide for penal sanctions for the donation of blood by people infected by the virus. Other States provide for sanctions for those who commit sexual acts or prostitute themselves knowing that they have AIDS. Yet others provide for sanctions for those who commit sexual acts when their partner has not been previously informed as to their condition.

When it comes to their actual application, these laws — even though aimed at controlling the transmission of AIDS — raise anew the problems of proof which have already been analysed with regard to the use of traditional cases in point. To overcome these problems some States are trying to change the nature of the offence by prefering 'exposure of a third person to contagion' to 'transmission' of the virus. This element would make it more easy for the prosecutor to prove that the accused had practised behaviour favourable to a transmission of the virus, without being obliged to prove that the victim was actually infected or that it was actually the accused who had passed on the infection. If, on the one hand, this approach allows a certain flexibility in the control of potential carriers of AIDS, on the other, it can give rise to marked uncertainty at a constitutional level, especially when there is

an absence of injury caused to a victim or, when such injury is caused, where there is an absence of proof necessary to indicate the accused as the cause of the infection.

3. Conflict between penal legislation and the constitutional right to privacy

A legislation specifically for AIDS, which aims at punishing the sexual conduct of the AIDS carrier, greatly interferes with the right to privacy which is constitutionally guaranteed in many countries. Precisely because of this limitation, it is clear that the forbidding of sexual conduct on the part of the person ill with AIDS — especially when this conduct takes place within the marriage or aims at procreation — because it belongs to the private sphere would have few chances of surviving the test of constitutionality. On the contrary, in the case of rape and prostitution, the right to privacy should not prevent the application of penal sanctions to those who practise behaviour of this kind. Whether the right to privacy also governs extramarital relationships, and on this American law is contradictory, remains more problematical. Much depends upon the kind of legislation involved.

A recent legislative proposal takes these constitutional limitations into account. It directs the penal control for carriers of AIDS not so much to sexual activity as to all those forms of behaviour which entail the knowing or careless transfer of body liquids from the carrier of AIDS to a third party. In this proposal there is an attempt to regulate two forms of behaviour which are at the origins of contagion: sexual activity and the exchange of infected syringes. Above all for the first, there are a number of elements which are intended to remove penal responsibility, amongst these the fact that sexual activity took place within a marriage relationship and with an awareness of risk on the part of the partner.

4. Compulsory AIDS tests for certain types of criminals

In this case as well one can outline two positions on making it obligatory for certain criminals to undergo the AIDS test.





Those who are in favour believe that some of those convicted of sexual offences, drug takers, and prisoners are a population with a high risk of active and passive infection by the AIDS virus. This position stresses the advantages to be gained from the information obtained from a compulsory test: advantages to society because it would defend itself better against the diffusion of the virus, and advantages to those in the categories considered because a possible positive result to the test could help them to obtain necessary care and treatment.

Those who are against believe that a series of objections refute the suitability and the legality of the test's being compulsory. This position observes in fact that about a half to three-quarters of those who have a positive HIV test do not go on to contract AIDS and that the compulsory character of the test would create alarm out of proportion to its effectiveness and would create discrimination in such areas as work and housing. Questions of constitutionality linked to the violation of the right to privacy also exist with regard to a test which is compulsory for a specific number of categories.

The diffusion of the infection within prison institutions in the United States increased by 156% between 1985 and 1987, going from 766 cases to 1,964, and rose by 59% between 1986 and 1987.

If one considers that the average for the national increase for the same period (October 1986-October 1987) was 61%, one can speak of an absence of alarm regarding the AIDS situation in the prisons. The question of the compulsoriness of the test as a method of controlling the spread of the infection now concerns the whole population and this creates major uncertainties at a legal-constitutional level.

5. An evaluation of the use of the penal system to fight the spread of HIV. Conclusions

The two hypotheses considered are: penal control of the HIV carriers and the compulsoriness of the test for certain categories at special risk of contagion such as prison convicts; both entail arguments in favour and against the legal and constitutional practicability of penal intervention in this area.

The conflict between two rights, public health and the right to privacy, cannot be resolved by legal decisions or by constitutional courts. There is a need for careful evaluation, distinct from the formal standpoint, on the one hand, of the possible effectiveness of penal intervention as a deterrent towards the carriers of AIDS, and, on the other, the advantages and disadvantages of making the test compulsory for certain subjects who enter the System of Penal Justice, and, in particular, convicts in prison institutions.

In this evaluation it is necessary to consider the penal intervention within the context of the widest measures of prevention and education, and to measure its effectiveness in relation to other methods. But it is exactly in these two areas, those of prevention and education, that the greatest uncertainties arise. Nobody has as yet invented a magic recipe which can lead to effective prevention. The best educational instruments are still unknown, Indeed, prevention, education and penal control represent containers of different choices aimed at different groups, and their effectiveness is directly measured by the ability of these measures to reach their objective, bearing in mind the diversity of cultures, motivations, and behaviour amongst the different groups towards which they are directed.

It is also necessary to bear this diversity in mind in the case of penal intervention. The behaviour and the culture of the possible carriers of the HIV virus are profoundly different, whether one is talking of homosexual relationships, heterosexual relationships, the ritual exchange of syringes between drug addicts, or the exchange of syringes because of the impossibility of finding new ones. Each of these 'worlds' has its own 'culture' which reacts differently to prevention, penal control, and education. And diversity also exists inside the same category of subjects, when it overlaps with other 'cultures' or religions.

The complexity of the problem invites us to investigate, more than has ever been done in the past, the potential reactions of these groups to messages of prevention and education so that their content can be better directed towards the needs of the categories at risk. If this investment in prevention and education is made, recourse to the penal system will be diminished. This would confirm the hypothesis that today the more there is an inability to conceive and put into practice prevention and education, the more there is recourse to the penal system. Penal sanction has a tradition of being a deterrent which stretches back many centuries. It has been used and is now being used to discourage the practice of certain forms of behaviour which are injurious to society and the individual. Penal sanctions can be effective when the costs they inflict are higher than the benefits that the individual obtains in practising the behaviour against which such sanctions are applied. This rational paradigm is not easily applied to those who are ill with AIDS, potential carriers of the virus, or even less to drug addicts who exchange infected syringes. These are forms of behaviour which are not very sensitive to threats of penal sanctions. The psychology of these categories is very distant from the use of rational paradigms in the execution of their behaviour.

A critical reconsideration of the experience of penal legislation as an instrument of defence against AIDS raises the doubt in one's mind, therefore, that resorting to the penal system conceals a search for an easy system of general prevention in the absence of broad-ranging analyses of alternative systems of prevention and education. These should be developed.



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AIDS and Problems of Care

PROFESSOR ELIO GUZZANTI

The problems that arise in caring for patients with infections caused by HIV are different and present themselves in different ways according to the socioeconomic and cultural context in which the situation occurs.

In general, the most important health care problems involve organisation, the professional competence of the doctors, the ability and numbers of the nursing staff, and questions of funding.

The most important psycosocial problems have to do with the characteristics of the individual infected —that is to say, his membership in one or other of the categories at risk —with all the resulting consequences for relationships with the family and the community at large.

The most important ethical and spiritual problems concern, on the one hand, the patient — his personality, the values to which he adheres, and the reactions he has towards life and the disease — and, on the other, the behaviour of the doctors, the nurses, the families, and society in general, towards the patients.

The variable overlapping and interlocking character of these different problems, as they present themselves in different parts of the world and in each individual, involves such a variety of situations that one cannot draw univocal conclusions as to the best models of care to be adopted.

Certain principles, however, can be considered as generally valid and should therefore be followed, or an attempt should be made to follow them, wherever there are subjects afflicted by HIV infections.

1. Information and health education must create in the population at large that level of responsible knowledge which can combat those reactions of anxiety, of fear, and of rejection of those who are infected, which arise precisely because of ignorance of the question of existing means of prevention.

2. The diffusion of professional knowledge about AIDS and about methods of diagnosis and treatment must reach local communities in such a way as to hinder the rate of the infection's outbreak and spread, by means of the early identification of the situations at risk and the adoption of all measures which are of use in inhibiting the disease's manifestation.



3. Organization must be such as to guarantee that the use of blood and its derivatives is rational in its indication and safe in its application.

4. The services involved must be aware of the special nature of the HIV infection when present in women and children and must know how to manage the future course of every situation in the most appropriate way.

5. The services for drug addicts and sexually transmitted diseases must carry out active work in education and care towards those subjects who are special in that they have a high chance of contracting the HIV infection, of manifesting it in a very serious way, and of being able to transmit it to others with facility.

6. Hospitals must establish the best conditions possible for the care of AIDS subjects when hospitalised. They must guarantee them comfortable and dignified conditions and a suitable human and spiritual climate - especially in the case of subjects who are in a very serious condition or are mentally disturbed. Each hospital should act according to the organizational model which is most suited to the characteristics of the local health services, but should take into consideration the special conditions of the defective response of AIDS patients to other infecting stimuli and the not unusual presence in these of infections which are not opportunistic and which lend themselves to diffusion.

Furthermore, it is essential to remember that as the initial sense of

total powerlessness to influence the disease gradually gives way to a new knowledge of how to deal with at least certain aspects of it with some possibilities of success, it is obvious that the professional experience developed by groups of doctors and nurses dealing with the disease will constitute a further guarantee for the improved survival of these patients.

7. Conventional hospitalisation, however, must be limited to subjects in the most serious condition in each phase of the syndrome of the disease. Organization, therefore, must aim at the creation of 'open' hospital services which allow the patients to live out their existence in the most natural way possible in relation to their illness.

8. 'Open' hospital services, therefore, must extend to the home of the patient, or, in the few cases in which such a solution does not exist or is not practicable, to protected accomodation created by public authorities or voluntary bodies.

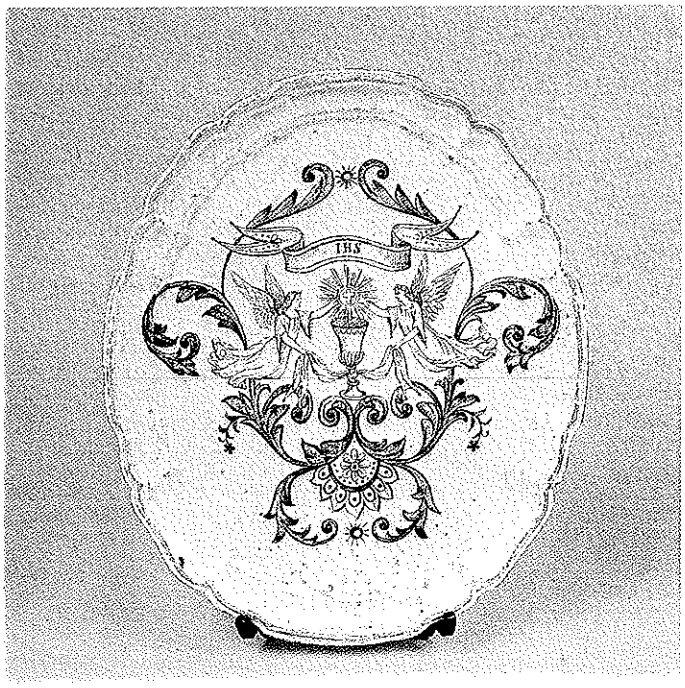
9. The 'open' organization of the services must not, however, represent a sort of 'do it yourself'. On the contrary, precise clinical and health care rules are required so that the patients are guaranteed the best possible benefits for their illness.

An effective co-ordination and control of the various initiatives is required. The clinical centres involved must have a role of central responsibility and must direct the fruits of their experience and knowledge outwards and ensure at the same time that these are absorbed at a local level and transferred to the community to the benefit of the patients.

10. In conclusion, but above all else, the approach to the subject infected with HIV, from the symptomless condition to the most serious stages of the syndrome, cannot be of a health care character but must, instead, have a global character which can deal with all the problems that arise with the disease and the afflicted person, and with the community as well. If the health intervention has to have a multidisciplinary character, the ethical, legal and spiritual aspects which involve each individual person must be even wider, especially if the person runs a high risk of infection or is already infected and ill.

The " To Live: Why? " Conference, therefore, find convincing and complete answers not only in the humanly and professionally suitable behaviour of health workers, but, at a more general level, in the attitude that society as a whole must adopt in this area, an attitude inspired by authentic values of life, understanding, and solidarity.

Professor ELIO GUZZANTI
Scientific Director
of the Child Jesus Hospital,
Rome



AIDS and Problems in Assistance

DR. GERHARD MEIER

Please allow me to begin by thanking His Excellency, Monsignor Angelini, for the invitation to Caritas Internationalis to share our insights and experience in facing this new challenge to the health and social stability of our world. Permit me also to compliment the Pontifical Council for Pastoral Assistance to Health Care Workers for choosing this timely and urgent topic for the theme of its Fourth International Conference. Indeed, many throughout the world have been encouraged by the fact that the topic of AIDS would be accorded such deep reflection and deliberation by so many world-famous scientists, Vatican officials, and others with practical, everyday experience in providing Church-sponsored health and social services to those who are most poor and neglected in present-day society.

As many of you are already aware, Caritas Internationalis is a Confederation of national member organizations, based in some 140 countries of the world, which provide vital health, development, and social assistance services, under the auspices of their respective Catholic hierarchies, to the most needy in those countries. Our basic mandate is " to spread charity and justice in the world, " and, as an International Catholic Organization, we locate ourselves as an integral part of the diaconal, socio-pastoral mission of the Church. Throughout its forty-year history, Caritas Internationalis has faced numerous complex social problems (including famine and drought, natural disasters, movements of refugees and forced migrants, illiteracy, lack of social and economic development) and brought the care and love of the Catholic Church to those whose lives are so deeply touched by such problems. Thus, it was both fitting and necessary that Caritas Internationalis discussed the pandemic of AIDS at its last General Assembly in 1987 and committed itself to mobilize an appropriate response to this pandemic. For the past two years, we have utilized the words of the Holy Father to representatives of the Catholic Health Association of the United States as a basis for our reflection and action:

" Today you are faced with new challenges, new needs. One of these is the present crisis of immense proportions which is that of AIDS and AIDS-Related Complex. Besides your professional contribution and your human sensitivities toward all affected by this disease, you are called to show the love and compassion of Christ and His Church. "

The topic which has been assigned to this Round Table is that of " Problems in Assistance. " At the outset, I would like to respectfully suggest, however, that we view the pandemic of AIDS primarily from the perspective of the " people " it affects rather than from that of the problems it produces. AIDS is first and foremost a *human* story - that of Juan and Maria, from Santiago de Chile, and of their newborn baby, all of whom are HIV-positive; of Paul, who worked for years on oil rigs in the Middle East and now has returned home to New Orleans, Louisiana, in the United States, in order to seek the comfort of old friends and expert medical care, after his first bout with pneumonia; of Immaculata, in Uganda, who has lost her three adult children and their spouses to AIDS, and is now struggling to provide food and schooling for her eight grandchildren; of Tom, also from the United States, who thought he would die within a few hours of first receiving the diagnosis of AIDS, but instead has survived more than five years and spends all of his days and nights counseling and comforting others in the community who have been affected by AIDS.

The first problem or difficulty which we in the Caritas movement needed to overcome was that of *Our own fear and prejudice about this illness*. Even as committed professionals and volunteers within an organization which has offered courageous service to needy persons, many of us were hesitant to respond to AIDS. The best means which we found to overcome our fears was to listen to and come to know personally those affected by AIDS—the persons whom I just described and countless others. Thus we were able to progress beyond the inaccurate concepts of " high risk groups, " or of " guilty or innocent victims, " to an initial understanding of the real suffering and pain, as well as of the joys and hopes, of persons with AIDS and of their loved ones. The words of the 1987 statement entitled " The Many Faces of AIDS: A Gospel Response, " and released by the bishops who are members of the Administrative Board of the United States Catholic Conference, have been extremely helpful to us in this regard:

" For Christians ...stories of persons with AIDS must not become occasions for stereotyping or prejudice, for anger or recrimination, for rejection or isolation, for injustice or condemnation. They provide us with an opportunity to walk with those who are suffering, to be compassionate toward those whom we might otherwise fear, to bring strength and cour-

age to those who face the prospect of dying as well as to their loved ones.

In our attempts to overcome the fear and prejudice about AIDS within our own movement, Caritas Internationalis has been sponsoring Consultations on AIDS for leaders of Caritas organizations, bishops, and others engaged in Church-sponsored social and health services. Our first International Consultation was held in London, England, in December, 1987. Since that time, we have also organized regional consultations in South America, Francophone Africa, and the Anglophone and Francophone Caribbean. In the near future, we will hold similar seminars in Central America and the Hispanophone Caribbean, Europe, Western Africa, and Asia. An important element is all these seminars is that of direct dialogue with persons affected by AIDS. We also present the medical and scientific facts known about this disease, discuss the social and psychological effects on individuals and society, and reflect on the ethical and moral implications related to AIDS. As a result of these seminars, several national Caritas organizations have launched their own national and local programs of education and service in response to AIDS.

Other attempts to mobilize understanding and support for AIDS services within the Caritas movement include the formation of an Expert Working Group on AIDS, whose members meet every nine months for an intensive review of the AIDS situation throughout the world and discussion of topics of particular relevance to Caritas work. These same Working Group participants then serve as resource persons to their respective Caritas regional secretariats and national member organizations. We have also established AIDS Resource Centres in both Rome and London, where we collect various written and audiovisual materials related to AIDS and then circulate this information, by means of articles in our Caritas Information Flyer and other dossiers, to Caritas workers in various parts of the world.

The second difficulty which we have encountered in facing the challenge of AIDS is that of *mobilizing sufficient resources* in order to effectively respond to a pandemic of such alarming dimensions. You have already been given an epidemiological





overview of the disease, so I will not repeat the known statistics. Suffice it to say that this disease is affecting massive numbers of people, most of whom live in the very countries and communities which can least afford to expend additional resources on health and social services. Since the Church has admirably accepted responsibility for delivery of health and social services to large segments of the population in certain developing countries and even to many of the rural and urban poor residents in other industrialized countries, we must concern ourselves with adequate support to these already overtaxed services. In our contacts with Church-sponsored hospitals and health clinics in Africa and in Latin America, the Caritas network has noted a lack of sufficient beds for persons with AIDS (in some hospitals, between 50-90% of the medical service beds are being occupied by HIV-positive persons), of qualified staff to handle such an epidemic, and of basic medicines, equipment, and supplies. We have been encouraging Catholic donor agencies to rethink the traditional distinctions which they have been making between relief and development projects in order to remain more open to the exigencies of the moment presented to us by AIDS.

Caritas Internationalis, in conjunction with the Catholic Fund for Overseas Development, our national member organization from England and Wales, which serves as the Caritas liaision agency for AIDS programmes and services, has launched appeals in excess of 1 million (US) to support AIDS projects in Africa and Latin America. These projects include expansion of hospital facilities, supply of medicines and HIV-testing equipment, educational programmes for clergy, religious, and health care workers, outfitting and staffing of mobile home care units, support of residences for homeless persons with AIDS. The response to date, both from governmental aid and development agencies and from private, local Church initiatives has been most generous.

Still to be faced, however, are the relatively new challenges to support and funding. These include:

— the re-stabilization of the economic and social support base in some villages in developing countries, where large numbers of young and

middle-aged adults are becoming ill and dying of AIDS;

— the care of elderly persons who are suddenly surviving their adult children and are thus unable to rely on the traditional family care system for older persons;

— the nurturing and education of thousands of children whose parents have either died or have become severely incapacitated because of AIDS.

The final challenge or problem which I wish to mention is the *need to develop a holistic approach to AIDS services,* which integrates pastoral care with health and social services. Too often, even those of us who work within Church-based organizations concentrate our attention and energies on the scientific, technical aspects of care and ignore the deeper, *spiritual* needs and hunger of persons with AIDS. Thus, the vision articulated by the Australian bishops awaits a more complete response on the part of Catholics throughout the world:

" *From our own Catholic community,* we seek a ministry of spiritual and practical assistance to all AIDS patients, their families and friends. We anticipate every parish will soon be touched by AIDS in some way, through individual sufferers, their families and friends. Our clergy, religious and lay leaders need to be fully informed in order to minister to them "

We are indeed lacking many of the pastoral skills to assist young persons who are dying to find meaning and hope in their earthly suffering, to call ourselves to a radical conversion capable of eliminating the economic, social, and behavioral abuses, which are such prevalent factors in the spread of this disease, to incorporate prayer, ritual, and meditation in our health and social service contacts with AIDS-affected persons

While humbly acknowedging the many problems which we in Caritas Internationalis have faced in attempting to animate and coordinate the response of Catholic diaconal organizations to this pandemic, we do not in any way wish to project a pessimistic or fatalistic attitude. Our Church has indeed courageously and selflessly answered the challenge of AIDS -through the volunteers in Sao Paulo, Brazil, who visit and bring meals to persons with AIDS; through the professional and volunteer workers in AIDS hospices in New Orleans, Miami, New York, San Francisco, Santiago de Chile, and San Juan; through the Jesuit priest and religious sister who visit the AIDS ward of Grand Bahamas Hospital each day; through the bishops of Tanzania who have prepared and implemented a five-year action plan to address AIDS in their country; through the religious sister in Uganda who is trying to counsel young people in their country about the choices which they can make to delay sexual activity until after marriage; through Christian legislators and political leaders who are attempting to guarantee the social and civil rights of those infected by the HIV virus; and through countless other committed, compassionate, and caring individuals (many of whom are HIV-positive themselves) who are giving much but perhaps receiving more as they reach out to alleviate suffering and to bring hope to those whose lives have been torn apart by AIDS.





Thus, let us hope that our present and future actions may be guided by the spirit of Cardinal Basil Hume's advice:

" Confronted with the complexity of today's crisis, we do well to remember that all is by no means lost. It is still possible for us to draw back from the brink and to lessen, if not entirely eliminate, the menace of the AIDS epidemic and indeed to learn from it. In this endeavour we desperately need the knowledge, skills and inventiveness of scientists and doctors. But, more especially, we have to learn how to live and love in a more genuinely human way ".

Dr. GERHARD MEIER
Secretary General of Caritas Internationalis

The Church and AIDS Patients

MONSIGNOR IVAN MARIN

1. My talk is not a scientific one. I do not intend to present statistics or studies. I wish only to propose a reflection arising from the distressing challenge that AIDS provides us with.

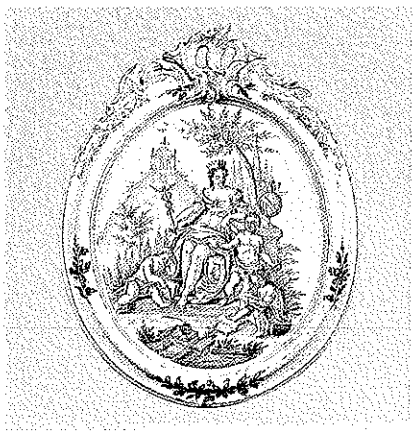
2. The photograph on page 2 of the programme of this IV International Conference can place us right in the midst of what I wish to say. There we see Pope John Paul, with great feeling and spontaneity, tenderly embracing little Brendan O'Rourke, an AIDS victim. This gesture aroused great admiration. It mobilized those who where ready to be mobilized. And it spurred many groups to involve themselves more fully in the care of AIDS victims.

In a similar way, we could admire thousands of photographs of mothers and fathers, doctors and health care personnel, women and men, who dedicate themselves diligently and with admirable sensitivity to the ever growing number of those who are ill. The gestures of human goodness and human feeling are multiple.

We are able to see the same moving image if we open the Gospels to those passages were Jesus reveals his loving care for the sick: contrary to the prevailing mentality of his time, he breaks bread with those whom the law declares impure, he heals the lepers, with his hands and with his saliva he restores sight to the blind.

As we recall these actions, we hear again the words of Jesus, " What you have done to one of these... you have done to me. " And it is precisely from these actions and such words that we Christians can draw the energy and the necessary incentives to confront the enormous challenge posed by AIDS.

3. The Church does not have a scientific response to those who, in the face of AIDS, seek such an answer - whether they be the ones suffering from the disease, or communities living in fear or at risk, or scientists who have not yet found a definitive solution to the problem. She does, however, have a response that comes from her motherly heart. The Church offers her full power to act to create an awareness of universal solidarity, of fraternal behaviour towards all.



4. In the light of the principle of universal solidarity among all people, by which the joys and the sorrows of each one become the joys and the sorrows of all, it is possible to establish a common front:

— so that no human being suffering from AIDS will feel alone and discriminated against, but, on the contrary, will feel loved and supported and will receive every care that a person deserves;

— so that fear of, prejudice against and distrust of persons will be changed into an attitude of objective serenity, human understanding, effective charity and responsible care;

— to help, with all the necessary means, and to stimulate, with determination, the scientific research needed to discover the cause(s) of the disease and an adequate treatment for it;

— to sustain and to animate the persons and institutions already dedicated with so much generosity to the care of the sick.

5. Because we are members of the one human family, we Christians can say to AIDS victims that they are not alone, that we will not abandon them, that we will accompany them, that we will watch lest they lack needed attention, that we will support all the research needed to find suitable treatment; as well, we can urge them to have hope because the entire human family is involved in the search for a solution.

6. Because of Christ's example and his " new commandment, " we can assure those suffering from AIDS that in each one of them we see the suffering face of Christ himself and, for this reason, they can be sure of our love, our respect, our solidarity and

our help. We are certain that the transforming force of the love of Christ knows how to change people's hearts and even the structures of the world.

7. In the light of the solemn commitment assumed by the Catholic Church in the Second Vatican Council, where it declared that " the joy and hope, the sorrow and anxiety of the people of our time, especially of the poor and of those who are in any way suffering, these Christ's disciples make their own, and there is nothing human that does not find an echo in their hearts " (*Gaudium et Spes*, no. 1), we are able to affirm, as has already been affirmed by many bishops' conferences and numerous Christian communities:

— that the Church will never abandon those suffering from AIDS and will help with special care those who suffer most;

— that the Church will never tire of teaching by word and deed that the example of Christ in relation to the sick constitutes for Christians a rule of conduct that defines the attitude to be taken in relation to AIDS sufferers;

— that the Church, as the humble servant of humanity, will redouble its efforts to assist the sick and to educate the human community in solidarity and responsibility.

8. The Pontifical Council COR UNUM is the point of encounter of all the Catholic aid organizations, all the Catholic organizations for assistance and support of full human development. It undertakes to animate these organizations

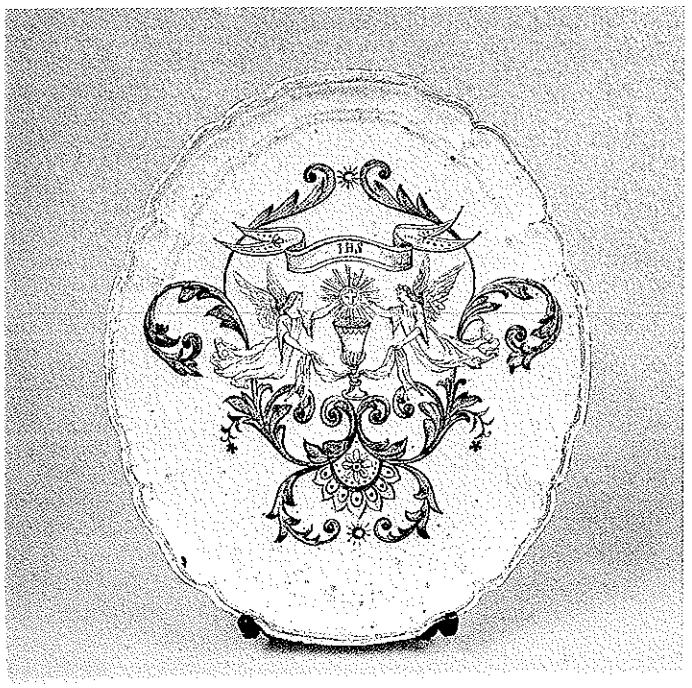
— so that they manifest in their work that the power of the love of Christ is able to surpass even those bounds that are already filled with generosity and even heroism;

— so that they give their complete support and assistance to concrete acts of welcome and support for those suffering from AIDS;

— so that they intensify their work for the prevention of the disease and in favour of education to brotherhood.

We are aware that the challenge is immense. We are confident that humanity will know how to be more truly united in solidarity in order to come out of this test victorious. We expect that charity will know how to vanquish fear and transform prejudices into more truly human attitudes. The charity of Christ can save humanity.

Monsignor IVAN MARIN
Undersecretary of COR UNUM



AIDS: Towards a Comprehensive Strategy in South Africa

CECILIA MOLOANTOA

Introduction

AIDS is a disease which will have a profound effect on human society. It has outstripped the definition of epidemic and has become a pandemic moving relentlessly and fatally throughout the world. The virus responsible for AIDS i.e. Human Immuno-Deficiency Virus (H.I.V.) knows no distinction between people of different nationalities, religions, sexes or ages.

It is not a simple problem, but a human problem which has reached crisis proportions in many parts of the world.

AIDS phenomenon is complex. The complexity of this problem is poorly understood and grossly underestimated in some cases.

Epidemiology of AIDS in South Africa

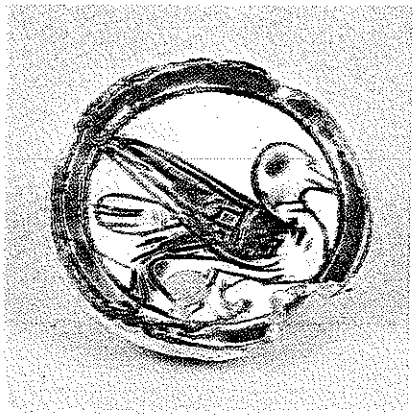
AIDS is a new disease which may have been present in Africa since the early 1970's and in isolated cases in the West since 1979; it was first recognised in America in 1981. Cases of AIDS have been reported worldwide in 133 Countries. The World Health Organisation estimates a global total of half million people with AIDS, and that in Africa alone there are an estimated 2 5 million people infected with H.I.V., and this number is expected to increase nine times in the next decade.

AIDS has reached South Africa. By the end of August 1989 a cumulative total of 176 people were officially reported.

However, reporting is incomplete and the estimated total of AIDS is closer to 375, about 33% more than reported.

In South Africa figures are much lower, as the epidemic is still in the early stages, but numbers of people infected with H.I.V. have increased rapidly over the last few years; it is estimated that for every person with full-blown AIDS, 50 to 100 people are liable to be infected one way or other. This gives an estimated number 13,550 - 27,100 infected people in South Africa.

South Africa is the only country that has data on transmission category and race. In the past, the majority of people with AIDS were white homosexual males, but the trend has changed from white homosexuals to heterosexuals. More and more black heterosexuals people are being diagnosed as infected, which poses a challenge to the Christian Community and society.



Organisation of a Catholic national AIDS structure

The Southern African Bishops' Conference is in the process of organising a National AIDS Structure that will monitor the AIDS Problem within the 30 dioceses of the S.A.C.B.C. This will be a multi-disciplinary Structure made up of Health Professionals, the Religious, and the Laity. They will be responsible for AIDS Programmes at all levels, focusing mainly on Awareness and Education, Pre-and-Post-Test Counselling, Ongoing Training Programmes and Pastoral Care for the people who will be involved with H.I.V. infected people and people with AIDS and their families.

This is still in the very initial stages, but involvement is already measurable in some dioceses; e.g., the Archdiocese of Cape Town has a home for people with AIDS, the Diocese of Johannesburg is involved in a training programme.

Christian and moral values

The ways in which the AIDS virus is spread have already been indicated as mainly sexual transmission,;this involves restoration of Christian and moral values.

This is where the Church comes in strongly: on education on sexuality — chastity outside of marriage and fidelity in marriage. Sex education targeting the youth is taught in schools and the pre Confirmation catechetical instruction.

The ongoing Awareness Programme on AIDS as an educational measure is carried out as to highlight the seriousness of the problem and to change attitudes. Judgemental attitudes are very much discouraged. The people are to be treated with love and compassion.

The use of condoms as a preventive measure is unacceptable.

The Moral Theological Advisory Commission is working on a Pastoral Letter on AIDS.

Education and training

Education is essential and should be correct from angles such as Christian Teachings, Medical Facts, Counselling, Caring, and Culture.

The dissemination of information in the most acceptable languages to the groups is important.

There are training facilities made available for us by the South African Institute of Medical in Johannesburg. This is made freely accessible to all Catholics. The Health Professionals are the ones utilising this resource for now; this is to enable them to carry on training in their areas.

Caring

One of our dioceses is running a home for AIDS terminally ill AIDS patients; care is rendered for both spiritual and material needs.

We are in constant contact with the Body-Positive Organisation (people who are H.I.V. positive), which expresses its needs and can refer members for any assistance from us where necessary.

Networking

Relations with Non-Governmental Organisations involved with AIDS are close: e.g., South African Council of Churches, Body Positive, Medical Research Institute of South Africa, and many others.

We respond to invitations to local and international meetings by attending or making a contribution.

A resource Centre is to be set up for information and teaching aids for distribution within the 30 dioceses of the Southern African Catholic Bishops' Conference.

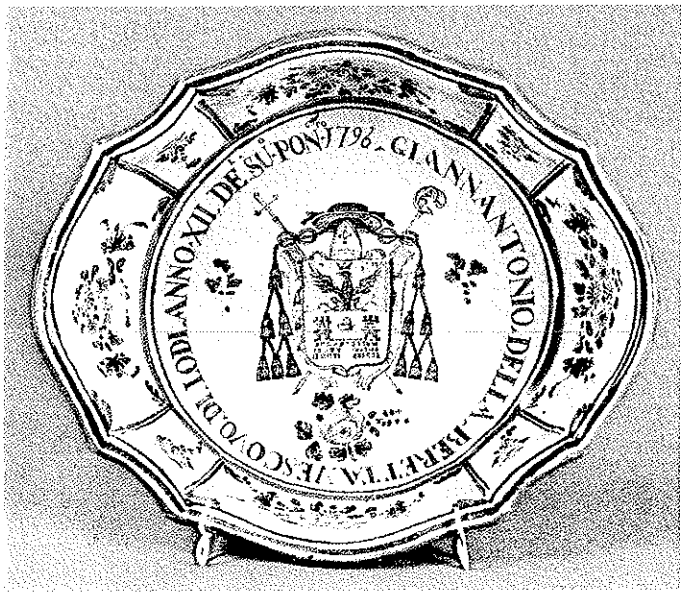
Summary

The S.A.C.B.C. is in the process of developing machinery to combat AIDS.

The problem is not very serious as yet in South Africa in comparison with other parts of the world, and this gives us time to be well geared for combatting AIDS.

The Christian Communities should respond to this problem with compassion and love. Judgemental attitudes should be avoided.

Mrs CECILIA MOLOANTOA
Secretary, Health Care and Education Dept.
Southern African Bishops' Conference



London: The Mildmay Mission and AIDS Patients

HELEN TAYLOR-THOMPSON

Introduction

What is the Christian response to those dying of AIDS?

Generally speaking, the people who come to us are young and in their prime, looking forward to a fulfilling life. Instead, with AIDS, they know that they have a very limited lifespan which will be full of suffering. Unlike many other illnesses, AIDS at present has no known cure. Therefore, they have no hope and, humanly speaking there is every reason to despair. So how should Christians respond to the challenge of AIDS? There are many responses Christians could make, all equally valid:

— through education and teaching: in churches, schools, the media;

— through practical initiatives, housing, for example, in hostels or sheltered accomodation, or through fostering and adoption of children affected by AIDS;

— bereavement support and follow-up to families and friends;

— practical support to those struggling to care for a family member with AIDS;

— terminal or long-term facilities.

What would mark out the response as being specifically Christian—not just professional or by force of circumstance?

1) that the response is made by Christians;

2) that it is in response to needs clearly identified, but not being responded to, by government or statutory services;

3) that it makes provision for "whole person care," integrating the spiritual care into the care for physical, emotional and social needs, as appropriate to the service being set up;

4) that the standards and behaviour of the people involved witness to their Christian beliefs.

The important question for Christians to ask themselves when faced with a person, or community in need, must surely be "How would Jesus respond to this person or situation?"

This is the question that the Mildmay Board of Governors and Management asked themselves when they were faced with the increasing number of people with AIDS in London at the end of 1986. In January 1987 the Board prayerfully and unanimously made the decision that our response to the needs being identified should be through setting up a terminal care facility in the East End of London. We were the first in Europe to identify and plan ahead for this particular need amongst people affected by AIDS.

The needs and appropriate responses in this field of care were fully researched by our Medical Director and Matron, through visits to San Francisco and in talking with people with AIDS and their carers, prior to setting up our services. They also set up an extensive education programme for existing staff and gave much time to dealing with the issues inevitably raised by them, and our supporters, relating to moral and Christian attitudes to AIDS and those suffering as a result of it.

Brief history of Mildmay

1. Just over 100 years ago, as a cholera epidemic swept the East End of London, the Reverend William Pennefather took up the challenge and trained Deaconesses to go out into the community to care for, and minister to, the sufferers and their families. This was the birth of Mildmay, and the present hospital was built in memory of this great man in 1892.

2. It was taken over by the National Health Service in 1948 and functioned as a small, much-loved district general hospital until it was closed down in 1982 as a measure of rationalisation.

3. After a campaign supported by much prayer it was allowed to reopen in 1985 as an independent Christian Charity to set up services relevant to local needs. It is staffed both by committed Christians who come from a variety of denominations and by others who are in sympathy with the aims of the hospital. The first service was an in-patient unit for twelve young Chronically Sick and Disabled people. This is still continuing, with the addition of a Day Centre which can take up to ten disabled people daily. Then in 1988 the AIDS Unit was opened as a second major service.

The Aids unit

Our present provision for people with AIDS includes:

1. Two in-patient units

— Elizabeth Hospice Unit with nine single rooms which have en suite facilities

— Tankerville Continuing Care Unit with eight rooms. These two units provide terminal, respite and convalescent care.

2. A day and home care service, enabling patients to remain at home, and to die at home should they wish to do so.

3. An Education Centre with a library, offering a number of conferences, seminars and courses.

4. A 3-bedroom apartment for visiting families and friends, many of whom live in other parts of the UK. Cardinal Hume helped us fundraise for this.

We plan to set up a small specialist unit catering for the needs of women and children with AIDS.

The aims of the hospital is to express our Christian faith through the way we care, the high professional standards we set, and through the provision of a programme of individualised care for the whole person, and for his/her loved ones. Our emphasis is on *Living with AIDS.*

We do this through an interdisciplinary team consisting of nurses, doctors, counsellors, social workers, therapists and a resident chaplain who liaises with the spiritual advisers, religious leaders or chaplains appropriate to, or chosen by, the patient. Our care is patient-directed, which means that, as far as is possible, we give the control to the patient, giving him/her information so as to enable him/her to make informed choices. We treat each person with respect, accepting him or her as they are, loving them unconditionally, as we believe them to be loved by God. We have found that many are ready to explore and address spiritual issues, fears and doubts— responding, as we believe, to the prompting of the Holy Spirit in their hearts, in their own way and in their own time. We have been moved by the courage and devotion we have seen over and over again in patients, their partners, families and friends of our patients.

Conclusion

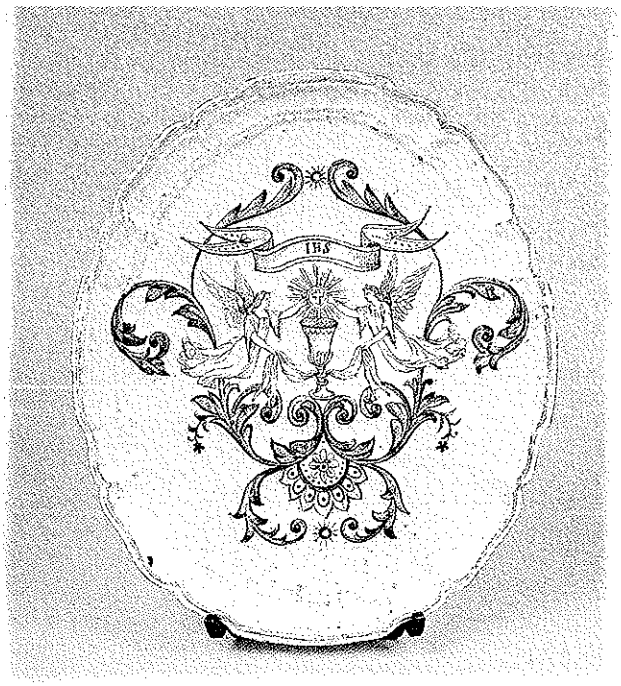
To conclude, I would like to tell you the stories of two very special people who lived and died with us at Mildmay.

Julie was 25 years old. She had been used and abused all her life. She had her first termination when she was 13; the baby was her father's. She became a drug-addict, and a prostitute to finance the habit in her teens. The first unselfish love she had ever known was given to her through her friendship with a woman. She came to us for terminal care some time after she had been diagnosed as having AIDS. For the first time in her life she experienced beauty, security and love, and began to explore deeper issues of life and death. She was scared of dying and of hell. Through many hours of listening and spending time with her, the staff were able to bring her reassurance and comfort; she grew to love the 23rd Psalm and requested that it should be read at her funeral.

Martin was in his 30's and was referred to us when he expected to have only 1/2 weeks to live. Through good symptom-control and the general approach we took to his care, his condition improved and he regained his will to live. He told this to the television crew who interviewed him when Her Royal Highness the Princess Diana came to visit, and met him. He was thrilled to meet her and to present her with a bunch of flowers. She shook his hand, and chatted, as she did with all the patients. The publicity meant that his mother and sister, with whom he had lost touch, saw him and came to visit him. Martin died ten days later, but in the meantime he had had several weeks of good quality of life, had refound his Catholic faith, and been reunited with his family before he died.

Like St. Francis, we pray that:
Where there is hatred, give love;
Where there is injury, pardon;
Where there is doubt, faith;
Where there is despair, hope;
Where there is sadness, joy;
Where there is darkness, light
Grant that we may not seek so much to be consoled, as to
console;
to be understood, as to understand;
to be loved, as to love;
For in giving we receive, in pardoning we are pardoned,
and dying we are born into ETERNAL LIFE.

Mrs. HELEN TAYLOR THOMPSON
Chairman of the Board of Governors of the Mildmay Mission London



The Effects of MM1 on AIDS Patients

Dr Z LURHAMA
Dr A. SHAFIX
Dr M. DIESE BIMAMISANA

Introduction

The Acquired Immunodeficiency Syndrome (AIDS) is a collection of morbid manifestations which occur in an individual infected by the human immunodeficiency virus (HIV). It is characterised by a weakening of the immunity system, in this specific case immunity by celular transmission.

The highly impassioned struggle against this disease which humanity has waged has hitherto remained without success, as the progression and spread of this disease demonstrate.

In the present state the strategy has three aspects:

— the fight against opportunistic infections;

— the fight against the virus, and its corollary, the restitution of immunity;

— the prevention of the illness through vaccination.

Since the studies on vaccine which are in progress have not as yet obtained results, the first two objectives presently constitute the challenges which research teams must meet.

Its action in treating AIDS is described in this study.

Material and Methods

Patients

The ill people were gradually included in the study as they presented themselves to Internal Medicine of the University Clinics of Kinshasha. The study was conducted between May 1987 and June 1989.

The patients were adults afflicted by AIDS and at the fourth stage according to the criteria of CDC

Medicines and Methos

MM1 was used and is considered an anti-viral and immunostimulant product

The product was present in the form of a solution which is injectable intravenously (slow perfusion)

Results

1. The Patients

The study involved 2413 adult patients between 15 and 60 years old. They included 1363 women (56.4%) and 1050 men (43.6%). The age of the women varied between 15 and 45; the average age being 27.5. The age of the men varied between 21 and 60, and the average was 42.6. (See Table I).

2. Clinical Manifestations

All the ill people observed in the study were taken at the fourth stage, according to the CDC classification.

Amongst these clinical manifestations the most frequent were asthenia, weight loss, long-lasting fever, prurigo, pneumocystosis, chronic diarrhoea, tuberculosis, and mouth candidiasis.

The clinical development is set out in Table III.

— In T2 (six weeks): 121 deaths (5%)

— In T3 (one year): 678 deaths (28%)

Total deaths 891 (37%)

Relapse in 213 patients: 14% after a year.

Table I

	Women	Men	Total
15 years	7	—	7
16 - 20 years	103	—	103
21 - 25 years	419	29	448
26 - 30 years	463	34	497
31 - 35 years	211	186	397
36 - 40 years	120	307	427
41 - 45 years	40	398	438
51 - 55 years	—	85	85
56 - 60	—	11	11
	1363 (56.4%)	1050 (43.6%)	2413

Average age: Women: 27.5 years
Men: 42.6 years



Table II

Clinical Manifestations

	Women	Men	Total	%
1. Weight loss	1000	1310	2310	95,7
2 Asthenia	991	1291	2282	94,5
3. Mouth candidiasis	402	319	721	29,8
4 Hair straightening	110	198	308	12,7
5. Meningeal cryptococcosis	291	310	601	24,9
6 Chronic diarrhoea	398	553	951	39,4
7. Long-lasting fever	613	895	1508	62,4
8. Hepatomegalia	123	148	271	11,2
9 Lymphadenomegalia	245	197	442	18,3
10. Lymphoma	64	79	133	5,5
11. Kaposi's nodules	81	109	190	7,8
12. MI edema	98	76	174	7,2
13. Pneumocystosis	461	404	865	35,8
14. Prurigo	517	632	1149	47,6
15. Megalospenia	218	116	334	13,8
16. Tuberculosis	445	367	812	33,6
17. Zona	101	222	323	13,3
18 Genital herpes	93	104	197	8,1

Table III

Clinical Development

	T0	T1	%	T2	%	53	%
Asthenia	2282	984	41	149	6	91	5
Weight loss	2310	1011	42	421	18	213	14
Fever	1508	541	22	103	4	—	—
Prurigo	1149	634	26	201	9	13	1
Chronic diarrhoea	951	413	17	399	17	181	12
Mouth candidiasis	721	13	0,5	—	—	—	—
Tuberculosis	812	110	4,5	49	2	—	—
Pneunocystosis	865	112	5	51	2	—	—
Zona	323	—	—	—	—	—	—
Lymphadenomegalia	442	199	8	84	4	28	2
Hepatomegalia	271	49	2,0	33	1	—	—
Megalospenia	334	10	0,4	19	1	—	—
MI edema	174	62	2,5	58	2	—	—
Kaposi's nodules	190	190	8	190	8	—	—
Hair straightening	308	187	8	149	6	—	—
Meningeal cryptococcosis	601	312	13	276	12	—	—
Lymphoma	133	120	5	57	2	—	—
Genital herpes	197	39	2	—	—	—	—

N.B.: — The ill subjects were taken in the protocol of the fourth stage of CDC
— In T1 (three weeks): 92 deaths (4%)

Table IV

Weight

Weight	T0	T1	T2	T3
30-40 Kg	319	146	56	—
41-50 Kg	1610	785	728	410
51-60 Kg	208	916	856	566
61-70 Kg	150	269	301	287
71-80 Kg	80	109	159	101
81-90 Kg	46	22	26	84

Average levels: T0 : 52,5 Kg
T1 : 56 Kg
T2 : 56 Kg
T3 : 60,5 Kg

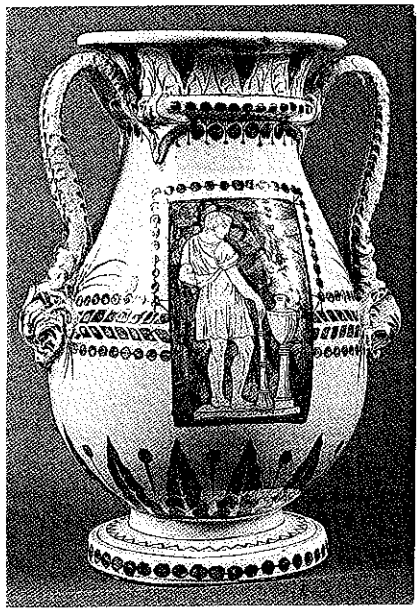


Table V

Transaninase (UI/ml)

SGOT (UI/ml)	T0	T1	T2	T3
⩽ 30	1811	1900	1901	1491
>30	602	421	299	31

Average levels: T0 : 27 UI/ml
T1 : 27 UI/ml
T2 : 26 UI/ml
T3 : 25 UI/ml

SGPT (UI/ml)	T0	T1	T2	T3
⩽ 40	1920	2054	1999	1497
>40	493	267	201	25

Average levels: T0 : 37 UI/ml
T1 : 36 UI/ml
T2 : 36 UI/ml
T3 : 35 UI/ml

Table VI

Hemoglobin

Hb (g %)	T0	T1	T2	T3
⩽ 5	81	—	—	—
6-10	497	403	215	176
>10	1835	1918	1985	1346

Average levels: T0 : 13,6 g%
T1 : 14,1 g%
T2 : 14,5 g%
T3 : 14,4 g%



Serum Creatinemia

Creat. (umol.)	T0	T1	T2	T3
71-106	2390	2321	2200	1522
>106	23	—	—	—

Average levels: T0 : 71,3 umol
T1 : 71 umol
T2 : 71 umol
T3 : 71 umol

Table VII

Lymphocytes Total

L.T	T0	T1	T2	T3
800	101	23	—	17
801-1000	913	112	15	224
1001-1200	776	267	98	410
1201-1400	509	814	154	276
1401-1600	114	95	310	343
1601-1800	—	557	417	200
1801-2000	—	268	208	31
2001-2200	—	143	283	13
2201-2400	—	40	165	1
2401-2600	—	—	121	6
2601-2800	—	2	118	1
2801-3000	—	—	109	—
3001-3200	—	—	202	—
3201-3400	—	—	—	—
3401-3600	—	—	—	—
3601-3800	—	—	—	—
3801-4000	—	—	—	—

Average levels: T0 : 1169
T1 : 1590
T2 : 1979
T3 : 1404

Table VIII

Lymphocytes T4

L. T4	T0	T1	T2	T3
⩽-100	912	17	—	399
101-200	1090	316	46	476
201-300	301	294	108	200
301-400	110	478	403	192
401-500	—	601	416	57
501-600	—	512	417	89
601-700	—	101	220	33
701-800	—	2	113	28
801-900	—	—	82	48
901-1000	—	—	180	—
1001-1100	—	—	215	—
1101-1200	—	—	—	—
1201-1300	—	—	—	—
1301-1400	—	—	—	—
1401-1500	—	—	—	—

Average levels: T0 : 184 ml
T1 : 441 ml
T2 : 634 ml
T3 : 291 ml

Table IX

Speed of Sedimentation

S.S.	T0	T1	T2	T3
-20	—	—	—	322
21-40	103	22	69	713
41-60	121	134	210	235
61-80	254	455	1323	98
81-100	314	702	344	70
101-120	1297	511	254	81
121-140	223	299	—	3
141-160	101	198	—	—

Average levels: T0 : 108 mm/h
T1 : 111 mm/h
T2 : 85 mm/h
T3 : 48 mm/h

A notable regression in the clinical manifestations was noticed half-way through the treatment (T1); this regression was even more notable at the end of treatment (T2). One year after the treatment (T3) these manifestations persisted only in a small number of patients.

During and after the treatment the weight variations were orientated towards an increase. In fact the weight increase was on average 4.5 kg half-way through the treatment (T1) and 8 kg a year after the treatment (T3) (Table III).

A reappearance of the clinical symptoms was noted in 213 patients (14%).

891 deaths were recorded, that is to say, 37% of the effective total.

3. The biological parameters

— It appears, to judge from the levels of transaninase, that liver function was not influenced by the treatment

Nor were the *renal functions* and *medulla ossium functions* influenced (Table V).

— The *total lymphocytes* increased progressively half-way through the treatment (T1) and at the end of the treatment (T2). A year after the treatment (T3) a tendency towards a diminution was noticed but a diminution that did not fall back into the initial figures.

— *The lymphocytes T4* equally increased in a progressive fashion in T1 and T2. In T3 a diminution was observed which, however, did not reach the figures before the treatment.

— *The speed of sedimentation* at the beginning was very rapid, and slowed down progressively until becoming normal in a good number of patients in T3

— The total proteins, which increased at the beginning to the detriment of gamma globulin, tended in the same way to become normal.

— The level of albumin did not seem to be influenced by the treatment

Conclusion

— The frequency point was on average 27.5 years for women and 42.5 years for men.

— The most frequent clinical manifestations in our environment were weight loss, asthenia, long-lasting fever, chronic diarrhoea, pneumocystosis and tuberculosis.

— Most of these clinical manifestations responded to treatment, but in a good number of patients relapse occurred a year after the end of the treatment.

— The weigh increase was on average 4.5 kg at the beginning of the treatment and 8 kg at the end.

— The lymphocyte totals increased during the course of the treatment, but a reduction was observed at the end of the treatment, without, however, falling back into the initial level.

— The same happened for the lymphocytes T4, but the diminution that was noted a year after the end of the treatment did not reach the initial levels.

— The speed of sedimentation diminished progressively and became almost normal a year after the end of the treatment.

— The hepatic and renal functions were not disturbed by the treatment The same occurred with regard to the functioning of the medulla ossium.

— The ill subjects were taken at the fourth stage of the CDC classification. There was a 37% rate of mortality and a 63% rate of remission.

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University Clinics of Kinshasa, Zaire

Table X

Serum Proteins

Prot. Tot. (g.l.)	T0	T1	T2	T3
60	21	—	—	—
61-80	587	499	923	993
80	1805	1822	1271	529

Average levels: T0 : 93 g/l
T1 : 99 g/l
T2 : 91 g/l
T3 : 76 g/l

Table XI

ALB. (mmol)	T0	T1	T2	T3
0,59	13	—	—	—
0,59-0,78	939	1201	1001	980
0,78	1461	1300	1199	542

Average levels: T0 : 0,82 g/l
T1 : 0,76 g/l
T2 : 0,72 g/l
T3 : 0,61 g/l

Problems in the Care of AIDS Patients in Brazil

GIUSEPPINA AZZOLINI

Brasil covers an area of 8,511,365 square kilometres, distributed in twenty-six states with a population density of fourteen inhabitants per square kilometer. The language spoken is Portuguese.

The estimated population is 140,000,000; largely urban (102 million) and 38 million rural.

Under the age of fifteen the population is 49,226,990; from one to four 15,681, 650 - from five to fourteen 33,545,340 -from fifteen to forty-nine 69,163,626 -over fifty 16,826,162 Fifty per cent of fourteen-year olds have group 0.

The mortality rate in 1984 was 6.2%.

Principal causes of death:

1) various symptoms 22.5%
2) cerebrovascular illnesses 8%
3) malign tumours 8.4%
4) respiratory illnesses 7.8%
5) cardiac illnesses 7.8%

Health care is offered to the population through five types of service:

— hospitals 5917
— health units 9320
— dispensaries 6851
— health emergency centers 334
— polyclinics 5616

For the care of the population this health service is insufficient because of the low number of beds—3.8% which corresponds to 500,000 beds, nearly all of them in the urban centers. The rural area is not helped.

These data emphasize an imminent collapse of the system of care for AIDS patients and carriers of the HIV virus.

a) The first problem concerning this type of patient regards the health care infrastructure: the material situation, lack of beds, incomplete training of professional personnel and, consequently, risks for the patient and for the personnel.

Let us not forget that the continent is poor.

b) social problem: family, stigma, taboo linked to behaviour at risk and, in society, being abandoned and forgotten.

Problems connected with health care:

— lack of solidarity, of humanity, hope. Voluntary workers are few and badly trained in a difficult situation —sex and death. How should terminal patients be cared for?

Ethical problem: responsibility towards one's own life by those who belong to the groups at risk.

Reflection: how should one help the victim of AIDS and the carrier of the virus? We must see the entire problem in question as being connected to death, to moral judgement, to sexuality.

These ill people are those who most have need of help; they are those who suffer the most because they are marginalised and abandoned. It is not rare to hear in the professional sphere that these people are the lepers of the twentieth- century, from whom we must defend and protect ourselves. This becomes still more serious because of the scarce information or mistaken information or because, as well, the information does not touch the level of culture of the population.

In itself the disease is already a traumatic experience, which for the carrier of the virus and the ill person is aggravated in daily life by the mark that AIDS leaves. This requires that among the health and voluntary workers there is present all the sensitivity and Christian love of which they are capable. The situation lived especially near to those who are about to die, in the decline of their strength, makes one think of four basic points for pastoral work:

Solidarity, a universal language understood by everybody, a gesture that makes the stranger a neighbour, a neighbour a brother, and a brother a son of God. Often the patient feels alone, isolated, forgotten. One of the worst diseases of the century is loneliness itself. This has already made hundreds of victims among carriers of AIDS, and many have resorted to suicide.

As if all the emotional stress that the disease provokes were not enough, there should be added segregation from the family, from friends, and from even health workers, because the mentality that it is socially and morally a dishonour to have relatives and friends with AIDS is strong. In addition, we make quick and moralistic judgements, in which God is seen as the great discipliner who uses this to call people to conversion. It is obvious that the feeling of compassion disappears.

Religious groups see AIDS as a punishment sent by God, a divine punishment for moral depravation. This recalls Sodom and Gomorrah. It has already been said that " AIDS is the wrath of God, vengeance. " It is obvious that this way of thinking does not help a person; it makes the ill person feel still more abandoned, marginalised from everything and by everybody like the last person on the face of the earth. We do not have the right to be the judges of the suffer-

ings of others. They also will participate with us at the banquet of life. " All this makes us go beyond the common feeling of compassion for the suffering of our neighbour and it leads us to act for the good of each and every person with greater readiness because we are responsible for everybody. " (John Paul II, *Sollicit.* pag. 539).

And it is here that solidarity is made necessary, and this consists in staying with the person and allowing him to be as he really is, in his life and in his choices, not as we would like him to be: not to cry or to laugh, but to understand. In our search we can substitute for neither God nor nature; we must only play our part.

Hope. Without hope there is no reason to live. People say that hope is the last thing to die. Hope has the effect that a person, even in the most terrible suffering, finds the strength to fight and to continue to live with dignity. To give hope to the ill person is to help him to face the tomorrow of life with reality, respecting his values and supporting him in the process of giving a sense to the anxious present of suffering. It is important to know how to listen, know how to make oneself a brother, understanding his concrete needs. We live in a society where people marginalize so much that they impose a social death before the biological death. It is important to remember that nobody wants to die. And these people must face a premature death.

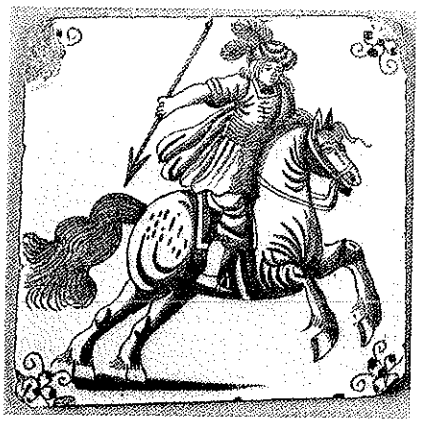
In this historic moment for AIDS, which is still without hope of a cure, it is said that only in the next century will we have a vaccine.

Death frightens us and it is not pleasant to think about. We prefer to deny it. It happens that together with this reality the person also is denied. It is dramatic to help a person who wants to live at all costs when he is condemned to die. In truth, he who helps also dies a little.

Another important reality is that the great majority of the victims of AIDS are young and obliged to say goodbye to life in its prime. What can we do?

We do not have a magic formula for the solution of the problem. The challenge is to stay with these people, helping them to interpret their situation in a creative and Christian fashion, and to listen to them with





feeling before opening one's mouth. This reality can become the seed for a new life. To die alone is sad; to die with someone at hand is to give him dignity. We cannot deceive and offer miraculous treatments, but it is our duty to work with hope. In pastoral action one must not remain in on Good Friday, but walk towards Sunday. Resurrection. We thus enter into the important aspect of our help, the value of faith and spirituality.

To lead a person to forgive himself; to forgive society and feel oneself, if necessary, forgiven by God. This helps in the finding of peace.

Spirituality. Spirituality is fundamentally linked to the presence and essence of God. It is important to present the ill person with an image of God wherein, before being a judge, He is a loving father who does not want and does not enjoy the suffering of his children.

Appropriate readings from the Bible, prayers, the sacraments, and the support of the community are of great value for Christians. Spiritual sensitivity becomes more acute in situations of suffering. We are witnesses of people who in suffering have found the path to reach family and God, above all through voluntary friends. It is for us to be agents of health, of encounter, of reconciliation.

The spirituality of people must find inspiration in the Gospels: " ....I was sick and you visited me " (Mt.25:36) Christ identified himself with the ill person. It is a challenge and a duty to put into practice. One is dealing with a profoundly human spirituality rooted in faith and in hope towards other people: young people depressed and disgusted by life who try to escape their own and other people's reality, in a 'no' to themselves and a 'no' to society, and who often resort to suicide because they have not felt the love of family, friends, and community.

Humanity. The human person is one in the physical, social, and spiritual dimensions. Today in the hospitals only the body (and sometimes hurriedly) is cared for and we forget about the other dimensions. To try to be human means helping a person in the globality of his needs.

How many people die before their time because they do not have the infrastructures that really help them to

live with dignity. How many ill people are abandoned by their families! And who welcomes them in ? Who helps the family in this process? Christian love must be translated into action. Good intentions do not solve the problem. It is necessary to do something, and immediately, according to the example of the Good Samaritan.

The greatest challenge is not to moralize, but to humanize the world and the environment. The Church, which is 'expert on humanity,' cannot fail to bear witness in this historic moment.

" The world of health is today awaiting new and great challenges from the Church. In the field of health care real human events are involved, such as suffering, illness, and death. " These are the words of the Pope *(Salvifici Doloris)*. Very many questions go beyond medicine to touch the essence of the human condition involving not only the social and organizational aspect, but also the ethical and religious aspect.

Even the fact of not belonging to the clergy or not being of a religious order has its value. The lay person with his experience of the world and his knowledge of its reality and needs, spirit of initiative, sense of personal responsibility, will to contribute to human development and to evangelization, sensitivity to human suffering, and gift of friendship, is an intelligent and precious contribution.

" There is work for all Just look around. It is enough to love. Love is really what is needed. The loving tenderness of a mother towards her child who is ill. Love that makes him be reconciled to himself, to life, and to society. To learn to speak new words. To face up to the ever present questions with new words. To understand that there is an individuality of pain, a way of being personal, which is without comparison and unrepeatable. Activity and co-operation with the laity as the Church sees and wants the laity today. To understand every painful reality, to comprehend, to keep oneself continually informed on the meaning of death and the thought of God and the Church, the Christian sense of suffering. Evil and suffering do not come from God, even if He obtains good from them because He is God. The strength of the Christian message which involves and overwhelms is a gift that will remain for centuries " (Germana Sommaruga).

Initiatives the Archdiocese of São Paolo is carrying out a pastoral programme with these ill people which has three objectives:

1. To defend victims of AIDS and carriers of the virus from marginalisation;
2. To educate the population, beginning with the comunities;
3. To serve the ill people with an aim, psychological and social support, with home care and in family residences.

Project Hope

Forty-eight volunteers spend a part of their time in hospital, in the dispensaries, in prisons, and in private homes, work that is being repeated in four States of the Nation. Doctors, priests, nurses, lawyers, social workers, housewives, and men of good will take part in it. An afternoon of instruction is devoted every week to preparing them for a more complete form of care. We help each other a great deal so as to get an AIDS victim admitted, to find food, money, and bed clothes. Often we bring them a prepared lunch, look for someone who can keep them company, and wash their things.

Normally these ill people live in small little rooms or attics or even in hovels, alone or in company, or with their family, that tries to hide them. The presence of the lawyer is important because we meet people who have small properties and must sell everything to live or transfer their property to the person who lives with them or to their family.

Our work is a service of compassion and of hope

GIUSEPPINA AZZOLINI
Professional Nurse
São Paulo, Brazil



The Family and AIDS

✠ *JEAN-FRANÇOIS ARRIGHI*

Your Excellency, esteemed President of the Pontifical Council for Pastoral Assistance to Health Care Workers Professors, Ladies and Gentlemen.

To speak of the family and AIDS seems at first to be paradoxical, but, in the light of two passages taken from the post-synodal exhortation of Pope John Paul II on the task of the Christian family in the world today, let us try to define some reference points with a view towards a better reflection.

1. Family Life as an Experience of Communion and Sharing

" The very existence of communion and sharing that should characterize the family's daily life represents its first and fundamental contribution to society.

The relationships between the members of the family community are inspired and guided by the law of 'free giving' By respecting and fostering personal dignity in each and every one as the only basis for value, this free giving takes the form of heartfelt acceptance, encounter and dialogue, disinterested availability, generous service, and deep solidarity.

" Thus the fostering of authentic and mature communion between persons within the family is the first and irreplaceable school of social life, an example and stimulus for the broader community relationship marked by respect, justice, dialogue, and love.

" The family is thus, as the Synod Fathers recalled, the place of origin and the most effective means for humanizing and personalizing society: it makes an original contribution in depth to building up the world, by making possible a life that is properly speaking human, in particular by guarding and transmitting virtues and 'values'. As the Second Vatican Council states, in the family, 'the various generations come together and help one another to grow wiser and to harmonize personal rights with the other requirements of social living'.

" Consequently, faced with a society that is running the risk of becoming more and more depersonalized and standardized and, therefore, inhuman and dehumanizing, with the negative results of many forms of escapism — such as alcoholism, drugs, and even terrorism — the family possesses and continues still to release formidable energies capable of taking man out of his anonymity, keeping him conscious of his personal dignity, enriching him with deep humanity and actively placing him, in his uniqueness and unrepeatability, within the fabric of society " *(Familiaris Consortio,* 43).

2. Those Without a Family

" I wish to add a further word for a category of people whom, as a result of the actual circumstances in which they are living, often not through their own deliberate wish, I consider particularly close to the Heart of Christ and deserving of the affection and active solicitude of the Church and of pastors. "

" There exist in the world countless people who unfortunately cannot in any sense claim membership in what could be called in the proper sense a family. Large sections of humanity live in conditions of extreme poverty, in which promiscuity, lack of housing, the irregular nature and instability of relationship, and the extreme lack of education make it impossible in practice to speak of a true family. There are others who, for various reasons, have been left alone in the world. And yet for all of these people there exists a 'good news of the family '".

" On behalf of those living in extreme poverty, I have already spoken of the urgent need to work courageously in order to find solutions, also at the political level, which will make it possible to help them and to overcome this inhuman condition of degradation. "

" It is a task that the whole of society, but in a special way of the authorities, by reason of their position and the responsabilities flowing therefrom, and also families, which must show great understanding and willingness to help.

For those who have no natural family the doors of the great family which is the Church — the Church which finds concrete expression in the diocesan and the parish family, in ecclesial basic communities and in movements of the apostolate — must be opened even wider. No one is without a family in this world: the Church is a home and family for everyone, especially those who 'labor and are *heavy laden* '" *(Familiaris Consortio,* 85).

In a recent document, the Spanish Episcopate courageously faced up to the problems of the disease and the family with the slogan: " The Family Counts Too! " concluding with some recommendations made in the light of findings drawn from everyday experience:

" We all have a family It is in the family that we experience the great

events of our existence, birth, growth, joys, sufferings, illness and death. When we are ill, the family is also ill and suffers, sometimes deeply. Illness changes the patterns of a family, its rhythm of life. It is a source of anxiety and sorrow, of worries, of disturbing emotional conflicts. Illness harshly tests the values on which rest the strength of family bonds and the solidarity between the members of a family. Most certainly, illness is a sad and painful experience which can destabilize a family, but which also can help in the deepening of family life. It can destroy the family or it can make the family more united.

" When we are ill the role of the family is fundamental. We need its affection and its care to feel that we are loved. We need its support and its help to be able to face realistically and succeed in accepting illness and death with peace of soul. "

" But to be able to confront the hard test of illness and to be able to play its own role best, the family cannot operate alone. It needs support and help. Sometimes it is the sick person himself who provides strength and courage by his will to live, his serenity and gratitude. Sometimes it is the members of the family who provide this strength and courage by their unity and mutual collaboration. Also it can be the medical personnel who help in the time of trial by working with the family, by their advice and by their skilled knowledge. For believers, it is faith in God which most often gives the strength to endure the illness and its consequences. "

Finally, the family has need of the help of society. In his message for the first World Day of Dialogue and Communication on AIDS (November 28th, 1988), His Holiness Pope John Paul II said: " The social institutions responsible for safeguarding public health are always urged to undertake all possible efforts to ensure its defence: however, that may only be done with respect for each person, and the whole person, by preventing the spread of the illness and in caring for those afflicted by it. The degree of civilization of any given society can be measured by the manner in which it responds to the needs of life and the suffering of the human person, precisely because the fragility of the mortal condition demands the greatest solidarity in the defence of the sacredness of life, from its beginning to its natural end, in every moment and phase of its evolution. "

The Pope continued: " The Catholic Church, which has received from her Founder, Jesus Christ, a heritage of special and attentive relations with the suffering, in every age, is no less concerned today with this new category of the sick. They must be looked upon as our brothers and sisters, whose human condition requires a special form of solidarity and help. "

It is in this context that the family remains the privileged place of solidarity and help. It is also the exemplary place for authentic sexuality. Sexuality is not a technical matter; it creates human relationship, and the more a relationship is authentic, the more it can enable people to stay together in all the moments of their truly human, interpersonal life story. The institution of the family is the place where this happens.

This concept of sexuality, fidelity to one's partner, commitment, and the gift of self, the expression of tenderness, is at the same time an effective factor in limiting the spread of AIDS. Therefore, in the face of the threat of such a plague we can only repeat the appeal of the Pope in *Familiaris Consortio*, " The future of humanity passes by way of the family "

Most Rev. JEAN-FRANÇOIS ARRIGHI
Vice President
of the Pontifical Council for the Family



Instructions for the Prevention of AIDS

PROFESSOR AUGUST WILHELM VON EIFF

Until such time as an effective means of immunization against HIV infection can be found, the main thrust of prophylactic control must lie in educating the public. Public health education may not be restricted to certain aspects while ignoring others; it must be truthful and honest. In this context, the following points must be borne in mind.

1. The Epidemiology of the Disease

To our knowledge, the transmission of AIDS occurs worldwide in 3 ways which differ according to the different proportions of homosexuals, intravenous drug-users, and heterosexuals in the affected population. Western Europe belongs to the same group as Scandinavia, North and South America, Australia and New Zealand — a group in which there is still a clear predominance of homosexuals and drug-users. There is still reason to stress this fact since, in 1989, only AIDS patients who became infected in 1989 minus x years are registered, whereby x must stand for an average number of 10, the duration of the disease until the clinical stage IV is reached.

In the past few years, however, it is quite likely that the pattern of infection has changed to include a larger proportion of heterosexuals. No one knows how many are infected, neither on the global level, nor in any given country. In order to find out the frequency of the cases of HIV infection at a given time — the so-called prevalence of the disease — all the citizens of a country would have to be tested. WHO estimates published in June 1989 cannot be considered reliable since the Delphi method was employed. More realistic findings would have been produced by a non-parametric analysis of the monthly rates of increase for the past two years. A perusal of the global rates of increase for 1988 shows them to be very variable. When the median is calculated, the monthly increase works out to be 4,072 AIDS cases. This variability can also be observed in 1989, where the median of the monthly rates of increase in the first nine months is 5,221.



2. Modes of transmission

One of the routes by which infection takes place is via infected blood (autotransfusions might have to be taken into consideration for major operations). Apart from that, infection occurs only as a result of a person's own risk-behaviour. The latter takes the form, on the one hand, of the growing risk posed by needle-sharing among drug-addicts and, on the other, a high-risk sexual behaviour in instances where a person's partner in seropositive: anal intercourse, contact with prostitutes, promiscuity, oro-genital practices, vaginal intercourse. Infections of the genital organs also encourage HIV infection. Those who receive the bodily fluids during the various sexual practices, are at a higher risk of infection, but their partners are also in danger. Finally, the risk of infection increases as the disease progresses.

Although transmission via saliva cannot be ruled out, the probability is very small since it has hitherto only been possible to find less than one infectious virus particle in 1 ml saliva. In the light of the current state of biological knowledge, anal intercourse can be considered a practice which basically goes against human nature since the sperm which enters the body in this way is treated as an antigen. The result is that large quantities of antibodies are produced against sperm.

What are the chances of becoming infected through heterosexual relations? The probability that a partner is infected is at its highest among

heterosexual partners in the so-called risk groups. In the event that the sexual relationship lasts for several months, the woman runs a higher risk than her male partner, whereas in cases of occasional contact, both sexes are equally vulnerable. Nevertheless, it should be mentioned that recent French investigations revealed that defloration by a seropositive man definitely constitutes a risk-factor.

Most of the infected heterosexuals also fall into this category of partners from the so-called risk groups. The probability of meeting a partner from one of the risk groups grows as the number of different partners increases, making highly promiscuous behaviour a risk-factor. A special danger in this context is posed by sex tourism. Of the 400,000 tourists from the Federal Republic of Germany who visited Thailand in 1988, 80,000 were sex tourists. It is important to bear in mind that the rate of infection among intravenous drug-users in Bangkok rose from zero in 1986, to 1% in 1987 on to 16% at the beginning of 1988 and that there are allegedly some 60,000 intravenous drug-users in Bangkok.

3. Progression of the disease

A distinction is commonly made between four stages of the disease: stage I — III are known as HIV infection and only stage IV is called AIDS. The only period during which the disease is not transmissible is the short period before virusemia takes place — approximately 1 to 2 weeks after infection. The normal routine tests currently in use are generally able to detect an infection within six months subsequent to infection, in other words when seroconversion has taken place.

However, it could take much longer for the person to seroconvert. Although the infected person is still considered seronegative throughout this period (only the very expensive Polymerase Chain-Reaction is able to detect HIV DNA shortly after infection) he/she is, however, still a potential source of infection. The incubation period or the time it takes for AIDS to become manifest, is approximately 10 -11 years and is, in all probability age-dependent, taking longer in the case of older persons than with young people.

4. Prophylaxis

Infection can be prevented if the aforementioned transmission routes are closed. With regard to sexual relations, this would mean that " safe sex " refers exclusively to a monogamous relationship between two uninfected persons. " Safer sex " would imply the use of condoms. The element of uncertainty with respect to condoms can be estimated at 8-17%; in the case of stable partnerships where the partners are experienced and motivated, the element of uncertainty is considerably reduced. However, in a marriage where one partner is infected, for example, in the case of a hemophiliac husband, the problem arises as to how to prevent the spouse from contracting the disease.

The Magisterium of the Church considers sexual abstinence to be the only adequate solution. However, since I am speaking here not as a moral theologian but as a physician, I must add that in the eyes of many physicians, in such a case, where there is a need for prophylaxis in the face of an infectious disease, the use of condoms is indicated.

Moreover, infected women should, in my opinion, employ a safe method of contraception since, in the event of pregnancy, there is a risk that the new-born child might be the victim of intrauterine or intra-partum infection. Pregnancy under these circumstances is not considered reason enough to indicate an abortion on medical grounds.

5. Public Health Education

Public health education must include a code of behaviour towards infected persons. The social death of AIDS patients may not anticipate their physical death. It is precisely Christians who should be doing all in their power to provide optimal care for seropositive persons and AIDS patients and working towards ensuring that they remain fully integrated in society and in the Church. A positive mental condition has an attenuating effect on the progression of the disease, perhaps as a result of the increased secretion of the hormone ACTH. A patient's environment can make a decisive contribution towards achieving such a condition.

Sex and AIDS-related education in schools should only take place in a context of parental involvement. Consequently, educational strategies for parents first have to be developed. As is the case for all other types of educational measures, here too, health education must be adapted in each case to the specific sociocultural situation and the prevailing level of academic education.

The mass media, like the state agencies, have a very special responsibility when it comes to reporting on AIDS and they, too, should always bear the above-mentioned points in mind.

Education must be conceived in such a way that it persuades by the facts alone. Ideological arguments have no place in educational measures. Especially in the case of young people with a natural-science background, it is also possible to illustrate the dignity of the human being by using the special status enjoyed by Mankind in Evolution. In any event, in combatting a disease of global dimensions, what counts is that the relevant educational measures are designed in such a way that they can be accepted as a whole by a pluralistic society

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AIDS and Responsible Procreation

MONSIGNOR ELIO SGRECCIA

Introduction

Ethics is usually seen as the study of problems of behaviour in regard to good, and moral norms. However, in addition to this science of behaviour, we should never forget reflection on values, or, more precisely, the ethics of values.

Both of these must be kept together, because it is difficult to sustain a norm if it is not linked to values, and it is impossible to accept behaviour without reference to values.

We are about to consider AIDS when it is present in a married couple or in a marriage, and with reference to procreation. We should take into consideration the set of values which make up these human and divine riches: namely, marriage, married love, and the procreation of a new life.

However, for reasons of time and space, we will have to talk about the behaviour of the married couple in the presence of seropositivity or of the evident disease of one of them, or of both of them, with regard to a possible mutual infection, or the infection of their child, and we will have to talk about behaviour. This is what we will do in the briefest possible way, but we wanted to keep these values in mind because correct behaviour will be accepted and put into practice only if these values are kept alive and if above them Christ's Compassionate and Redemptive Love is invoked, or, more hopefully, rendered vital and known. Otherwise it will be very difficult for the ethics of behaviour which is based simply on fear and on norms, even where the latter are valid, to survive.

And when we talk about behaviour, we must emphasise that among the known categories at risk (drug-addicts, male homosexuals, and those who receive blood-transfusions) there has recently emerged another category which is predisposed to the disease: children of women who are afflicted with AIDS or carriers of the HIV virus.

Compared to every other Western country, Italy has the highest incidence of paediatric AIDS in relation to the entire infected population. Starting from an estimate of only 100,000 infected people and considering the present epidemiological profile of the infection, the National Commission for the Fight against AIDS has calculated that each year we can expect not less than 600 births to HIVAb positive women.[1]



One is largely dealing with transplacental contagion, even though cases of infection linked solely to maternal breast-feeding have been known.[2]

Congenital infection, whose diagnosis after birth is always rather late, involves a very high risk for the baby of developing the disease with a short-term fatal prognosis.

Given that this disease cannot presently be cured, the only intervention which can reduce the diffusion of the disease is *prevention*.

Unfortunately, as has already occurred with other congenital diseases, the term " prevention " is used in this context in a new, broad-ranging and inappropriate way: prevention would be impediment to birth and suppression of the supposedly infected foetus.

But the proposal to interrupt the pregnancy, which is never justified and which is not acceptable from an ethical point of view — not even when there is a case of certain malformation — is even less acceptable in this situation, where the foetus is healthy in two-thirds of the cases and where it has no predisposition to contract the disease.

And, moreover, what prevention can one ever direct towards the ill person rather than against the disease?

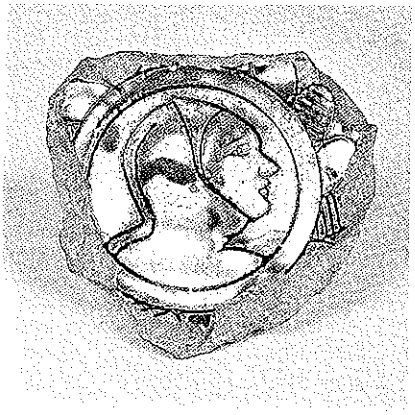
The prevention of AIDS

In the medical field, when one talks about prevention, on the one hand, one takes into consideration correct

information on the disease, the ways in which it arises, the methods used to avoid the risk of contraction, and, on the other, a detailed education whose aim is the recognition of the values which are involved and their possible implementation.

With regard to medical practice, at least three levels of intervention can be distinguished in the preventive field: 1) *primary* prevention, which is the implementation of measures directed towards all of the population at risk, so as to obstruct the establishment of the disease; 2) *secondary* prevention, which consists in avoiding the emergence of a recurrence; 3) *tertiary* prevention, which involves implementing appropriate and effective treatment whose aim is to limit the demage caused by a disease.

It is obvious that the formulation of programmes of prevention will strictly depend upon the cultural and ethical requirements involved. We think that it is better to examine these requirements by restricting them to the subject given to us: the responsibility of married couples who are afflicted with AIDS towards procreation.



The cultural context

When we talk about prevention, we can today distinguish at least three different methodological positions:

1. First of all, there is a position which is inspired by the idea of the *integral goodness* of the person and of each person. In this point of view there is not only an attempt to find ways of avoiding infection and contagion, but a model of life is proposed whose aim is to encourage and to defend the entire goodness of the person himself. This is the position that we can find in a marked and explicit way in the statements and publications of the Catholic Episcopates.[3] This position is inspired by a personalistic idea of man.

From here there comes the proposition of an ideal of sexuality which is based on the value of the family and of marital faithfulness. A set of values which, in their respect for life, help to overcome that culture of death, which overwhelms the weakest and most defenceless.

2. A second position, which we could call *medical-epidemiological*,



even if it does not reject the soundness of the integral proposition which has been previously explained, asserts the following: where there is a situation of imminent contagion and one cannot intervene with the culture of self-limitation and self-control, one must persevere in the use of certain means which can at least minimise the effects of disordered behaviour without modiying it. In the case of AIDS one should propose, when one cannot do nothing else, the use of a clean syringe to avoid contagion among drug-addicts and the use of a prophylactic (condom) where there is sexual intercourse between and with infected people.

3. Those who draw inspiration from the third model, which could be defined as *ideological*, not only uphold the legitimacy of practising disordered behaviour, but also the right to practise it freely. The only criterion of reference thus becomes freedom, a freedom which does not have any aim beyond itself. According to which, the use of drugs and free sex, for example, are always and in every way justified and allowed, provided that one uses measures to prevent the transmission of the disease.

Methods of intervention

We will now analyse the methods of intervention for the prevention of AIDS in the light of that vision of man that we have defined as personalistic. However, we will not fail to make comparisons with the two other methodological positions.

Primary Prevention In the case of congenital AIDS, the primary prevention consists of eliminating the causes which can produce its appearance.

There are two possible situations: we can find ourselves either faced with a couple where just one partner is infected or faced with another where both of them manifest signs of the disease or are carriers of it.

In the first case, in addition to the question of conceiving a baby affected by AIDS, it is necessary to avoid the healthy partner's becoming infected. However, we must bear in mind that the risk of a woman's transmitting the infection to a man is very low, the risk of the contrary being higher.[4]

The proposal, or, rather, the only

proposal presented for the purpose of prevention is, in this case, the use of the prophylactic, which would give the illusion of safe sex and the absence of danger. In fact, we already know how inefficacious the condom is in contraceptive terms (10-15%), and to this we must add the possibility that the HIV viral particle, being 500 times smaller than the sperm cell, further increases the rate of contagion.[5]

Even though the data was at first scarcely noted, studies carried out on human beings[6] have showed that the risk of catching AIDS, notwithstanding the use of condom is at least 15-16%.

It follows that the only really preventive approach, even if it requires greater effort, is abstinence from sexual intercourse wherever this could lead to contagion.

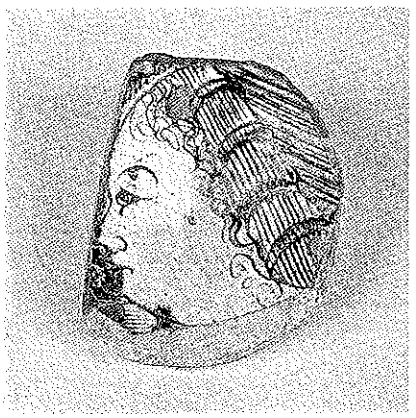
This requires education, and education in the light of a global vision of sexuality, of self-control and self-domination with regard to sexual impulses, even in married life, and with a level of virtue which can be called extraordinary.

It is clear that on a subjective level great virtue and great love between husband and wife are called for, to achieve that which does not objectively contrast with the goals of marriage and which is often called for even with other kinds of diseases or marital situations.

Therefore, no good reasons can be found to justify the attempt to consider the use of the condom as a treatment for AIDS as one of those contraceptive methods which can be accepted at an ethical level because they are, as can be read in *Humane Vitae* 15, necessary to treat organic diseases.

In fact, not only is the condom not a treatment; it can offer no guarantee with regard to safety, but, in addition, it cannot be considered as such in terms of the *therapeutic principle*.[7] This principle requires that a method be used in the treatment of a disease on condition that there is no other alternative: in our case, as we have already seen, the alternative exists, even if it requires a considerable effort to effect, and it is abstinence from sexual intercourse.

The second case we must consider is that of a married couple where both partners are infected and where the sole and overriding necessity is the avoidance of conception: what should we advise?





In this case, the only possible preventive measure is that represented by the advice given to the HIVAb positive woman and to the couple to delay an eventual pregnancy at least until scientific knowledge on the subject is more detailed.

And what can be done to avoid a conception? The proposal to use the condom for contraceptive ends is neither scientifically effective nor ethically acceptable.

As we have already seen, the percentage of failure with the condom, in terms of contraception, is from 10 to 15%. This means that of 100 couples using the condom, 10-15 couples are at risk in terms of conception: therefore, its use is not at all safe.

Apart from the condom, contraceptive practice involves many other artificial chemical and mechanical methods of avoiding conception.

From an ethical and Catholic point of view, we think it is first of all necessary to recall in brief fashion the needs of what is defined as *responsible procreation*.

One talks about the procreative responsibility of married people when they have reached such mastery and control over themselves that the sexual act (and therefore a possible procreation) becomes a conscious and personal act and not only an act that takes place in the person.

This implies that the marriage partners understand the truth of marriage and of procreation and that they orientate their behaviour towards this truth. The *truth* of the married act is declared in *Humanae Vitae* 12: " This particular doctrine, often expounded by the Magisterium of the Church, is based on the inseparable connection, established by God, which man on his own initiative may not break, between the unitive meaning and the procreative meaning which are both inherent to the marriage act. The reason is that the marriage act, because of its fundamental structure, while it unites husband and wife in the closest intimacy, also brings into operation laws written into the actual nature of man and of woman for the generation of new life. And if each of these essential qualities, the unitive and the procreative, is preserved, the use of marriage fully retains its sense of true mutual love and its ordination to the supreme responsibility of parenthood to which

man is called. "

One thus has a responsible attitude because it is orientated by and towards the truth, and it is the fruit of a free choice if the totality of this marriage act is respected and if this act is carried out with acceptance of the possibility of conception.

On the other hand, according to the meaning that we give to the word, it is not responsible to manipulate a marriage act with regard to its total and personal objective truth, in such a way as to express only the psycological-affective dimension and not the procreative dimension or a biological-physical fact and not the affective and spiritual union as well.

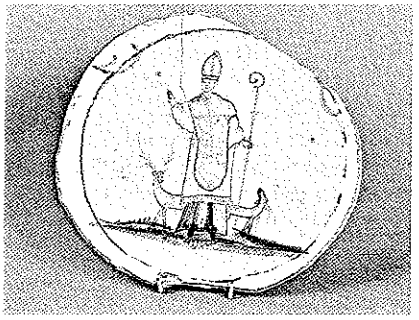
The marriage act, therefore, includes the unitive dimension and the procreative dimension, dimensions which are intrinsically interdependent and not incidentally linked: in this case to manipulate means to separate love from life in the individual act, it means to reduce this act of love which is personal and therefore total, it means not to recognise the truth of a reality and of a norm inscribed in the nature itself of the human person.

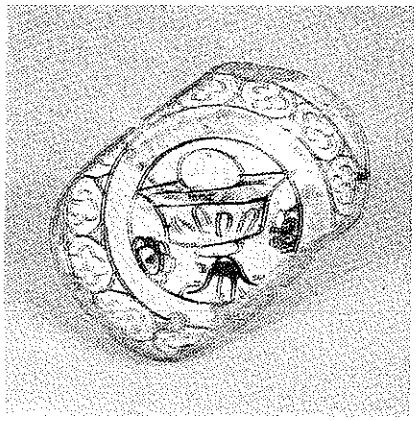
If follows that while contraception is ethically unacceptable, in so much as it is contrary to the personal truth of the married couple, periodic self-restraint, seen not only as an alternative to contraception itself but also as a moral virtue, is allowed provided that it does not go against a total and personal view of sexuality and that it does not involve the total refusal of procreation.

This means that there must be a full correlation between the objective good of the periodic self-restraint and the subjective intention of the married couple, and therefore periodic self-restraint cannot be practised with a contraceptive mentality.

In the specific case of AIDS (as a hypothetical example), while the use of contraception (condom) is ethically unacceptable, it is considered right that the married couple decide to avoid conception by using the so-called Natural Methods or, more exactly, methods based on biological rhythm, provided that whenever a conception occurs there is always and in every way a positive attitude of acceptance and welcome towards the new life.

With regard to *secondary prevention*, one is dealing with avoiding the





reccurrence of the same disease. In the case of antenatal AIDS, following a free and therefore responsible choice of the married couple, another pregnancy must be avoided if in the family there is, or there has already been, another baby afflicted with the Acquired Immunodeficiency Syndrome.

What can be done, however, if the pregnancy is under way?

In this case one must act with a form of prevention that we have defined as *tertiary prevention*. first of all, one must avoid the development of complications, and in this case, one must manage to ensure that the pregnancy does not end, in dramatic fashion, in abortion.

This is possible if we promote a culture of welcome towards the life that will be born, even if it is ill or partially ill, among the couple and their relatives, in the light of an incontrovertible truth: that the foetus is a human individual from the moment of conception, a personal human being.

And this right always exists even in the extremely painful and dramatic situation of a foetus which is malformed or infected by a contagious disease which will lead to death.

If this truth is accepted, certain logical consequences are imposed: first of all, that it is necessary to respect and to love that unborn human being, who has the fundamental or original right to life. And this love must be understood as a root which invigorates and feeds respect itself: love is the attitude which allows an acceptance of the other person as a person, a value in itself and for itself, an end.

In this case love must be even greater, because the unborn human being finds himself in a condition of greater need.

It is clear that one who is so ill represents a burden for his parents and family, not only in economic terms but above all else in psychological terms.

It is therefore thought necessary that the couple or the whole family should not be left alone, but helped and supported in its daily difficulties and in the research into possible advances in the field of treatment or care which can guarantee the dignified and human survival of the unborn child.

It is necessary to remember that even according to civil law, in the case of most legislation which envisages abortion when there is an indication of malformation, it would be illegal

to abort a foetus which will not necessarily be born ill, and which in any case is neither malformed nor afflicted by any pathology (for example, according to the Italian law 194/1978 abortion cannot be effected after ninety days).

It is for this reason that at some meetings, at times international, special laws have been requested which would allow abortion in any case in which one of the married couple is seropositive. Luckily, this request has not, as yet, been accepted by any country and we hope that the role of law, like that of science, will feel more and more closely bound to the defence of life and especially the life of these creatures, who will, perhaps, be able to see the day when there will be a treatment for this kind of contagion which cures, and not only a treatment which consists of education and prevention[8].

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[2] MAZZONI A., RICCHI E., *Prevenzione dell'infezione da HIV,* in SGRECCIA E. (ed.), *A.I.D.S. problemi bioetici correlati con la clinica, epidemiologica e le implicazioni socio-culturali della sindrome da immuno-deficienza aquisita,* Centro di Iniziativa Culturale, Bologna 1988: 153ss.

[3] The following is a list of statements made by the Episcopates and Ecclesiastical Authorities on the subject: CONFERENZA EPISCOPALE D'IRLANDA, Dichiarazione del Consiglio Permanente della Conferenza Episcopale di Irlanda in tema di AIDS, 16 Jan. 1987, Anime e Corpi 1987, 133: 638-640; CONFERENZA DEI VESCOVI SVIZZERI, Dichiarazione in tema di AIDS, 4 Feb. 1987, Anime e Corpi 1987, 133 640-641; CONSIGLIO PERMANENTE EPISCOPATO FRANCESE, *Comunicato sull'AIDS,* 10 Feb. 1987, Anime e Corpi, 1987/133: 641-642; EPISCOPATO BELGA, *Comunicato dei Vescovi Belgi sull'AIDS,* 17 March 1987, Anime e corpi 1987, 133: 646-647; CONFERENZA EPISCOPALE SPAGNOLA, *una nota pastorale dell'Episcopato spagnolo in tema di AIDS,* 12 June 1987, Dolentium Hominum 1987, 6: 25-28; COMMISSIONE SOCIALE DELL'EPISCOPATO FRANCESE, *Le SIDA: de la peur a à la solidarité,* 23 June 1987, La documentation Catholique 1987, 1944: 775-776; COMMISSIONE AMMINISTRATIVA DEI VESCOVI CATTOLICI-USA, *i tanti volti dell'AIDS: una risposta evangelica,* 24 Dec 1987, Il Regno Documenti 1988, 45: 170-177; DELEGAZIONE DELLA SANTA SEDE ALLA 40ª ASSEMBLEA DELL'OMS, *Le sens de la lutte contre le SIDA,* 8 May 1987, Documentation Catholique 1987, 1943: 704-706

Among the moralists who have considered this subject are: SGRECCIA E., *L'AIDS metafora culturale e catalizzatore di conflitti etici,* Vita e Pensiero 1988, 6: 408-422; *Idem., Problemi etici nel trattamento dell'AIDS,* Medicina e morale 1987, 1/2: 927; *Idem.* [ed.], *A.I.D.S....*, CONCETTI G., *AIDS. Problemi di coscienza,* Piemme, Casale Monferrato, 1987; CATTORINI P., *Strategie contro l'AIDS. Considerazioni etiche,* Aggiornamenti sociali, 4 April 1987, 263-283; SPAGNOLO A.G., *La prevenzione dell'AIDS. Verità scientifica e verità etica,* Rivista di Teologia Morale 1988, 80: 25-34.

[4] VIGEVANI G.M. *et al., Heterosexual transmission of HIV: a European Community Multicenter Study* IV Intern. Conf. on AIDS-Stockholm, 12-16 June 1988.

[5] In the spermatic liquid the AIDS virus is in the lymphocytes and therefore in a voluminous structure even if their free presence in the spermatic liquid itself is not yet excluded - as is the case with saliva and vaginal secretion.

[6] FISCHL M. et al., *Evaluation of heterosexual partners, children and household contacts of adults with AIDS,* JAMA 1987; 257: 640; *Idem, Heterosexual transmission of HIV,* IV Inter. Conf. on AIDS-Stockholm, 12-16 June 1988.

[7] Cf. SGRECCIA E., *Manuale di Bioetica,* Vita e Pensiero, Milan, 1989: 126 ss

[8] The hypothesis was advanced but not accepted at the first Meeting of the International Committee for the Prevention of AIDS, which took place in Paris on May 16, 1989 at the Elysée



AIDS and the Integrity of the Family

Fr RAYMOND C. O'BRIEN

Introduction

Scripture appears eerily mistaken when applied to the HIV epidemic; historical malevolence seems to have triumphed again.

This seems so because the invitation of Saint Matthew to love my enemy begins with the reminder that all persons are loved by God just as the "sun rises on the bad and the good, ... [and it] rains on the just and the unjust,"[1] Scripture and the transnational religions which scripture sustains present a presumption of equality where all men and women share equally in the possibilities of this earth, but the rebuttal of history is that epidemics such as HIV strike with far greater impact the poor and the oppressed.[2]

This prejudicial impact is present in America, where HIV was detected as the "gay plague"[3] and now rapidly becomes the plague of the drug-infected inner cities, thereby affecting mostly black and Hispanic men, women, and children.[4] This discriminatory impact is present in other parts of the world where AIDS also affects minorities who have been victimized by past discrimination, stigmatization, and legal sanctions. These persons include prostitutes, homosexuals, drug abusers, and the otherwise marginalized.[5] "The fact that people in these groups have been particularly affected by HIV/AIDS has increased the special risks of their further marginalization and of deprivation of their basic human rights."[6] Throughout the world—as has already occurred in America—the pivotal fact that HIV infects a particular person or class of persons in a scandalous fashion[7] invites the conclusion that HIV will definitely have an impact upon the definition, responsibilities, and attributes of the human and religious family.[8] Thus, AIDS has and will continue to affect the integrity of the family.

Having concluded that HIV will affect the family, and even though HIV has been identified for almost a decade, the disease is too nascent to allow for many specific conclusions regarding its affect upon the integrity of the family as a societal unit. There are too many factors involved: "Many HIV-infected persons suffer from illnesses that are not reportable as AIDS,"[9] and the disease has not at this point become a major threat to the world's wealthier and politically sensitive heterosexual populations.[10] The disease is still associated with persons already struggling with past discrimination and such persons are not likely to warrant unique public policy consideration.[11] And, finally, the social upheaval associated with a catastrophic epidemic has not yet brought about the economic burdens that always bring about new structurs and responsibility.

Nonetheless, AIDS has affected and will continue to affect the integrity of the family.

Even though specific conclusions regarding the connection between HIV and the family are elusive, in regard to the definition of family, HIV is having an effect because of the mobilization and political activism of persons affected.[12] For instance, in the United States, marriage between persons of the same sex has always been forbidden,[13] and there is no indication that marriage per se will become a political possibility within any of the states—as it is now in the country of Denmark—for persons of the same sex.[14] Nonetheless, American cities and courts are now willing to consider economic partnerships between persons of the same and the opposite sex,[15] perhaps in response to the numbers of persons living in non-marital relationships,[16] but also because persons living in urban centers that have been most affected by HIV have mobilized and demand greater economic and social security.[17]

This mobilization has come about in part because of the HIV crisis in American Cities. Mobilization by the gay and lesbian community will have a greater impact upon the definition and obligation of the family in the future;[18] any impact brought about by the poor, racial minorities, or any other group adversely affected by HIV will depend upon the degree of mobilization experienced by the group *and* by the desire of the group to function within societal institutions.[19] It is certainly conceivable that some groups, especially those trapped within poverty ghettos, could respond to the worsening of the HIV epidemic with revolt against existing institutions.

Throughout institutional change, social realignment, or in the extreme cases, revolt, the integrity of the family will shift and change in relationship to national culture, history and the exigencies of the moment. This has occurred since biblical times[20] and will continue today for many of the same reasons: mortality, economics, religion, ethics, and availability of options. Within this shifting and altering, the ideal of a Judeo-Christian family[21] will remain perdurable; indeed, the family apostolate, which recommends adoption of abandoned infants, hospitality to strangers, helpful advice and assistance for adolescents, involvement in moral cri-

ses, and help for the aged,[22] will be offered renewed opportunity. Nonetheless, secular concepts of the family will respond with their own agenda and in some cultures, parallel to the Judeo-Christian ideal, offering distinct alternatives to what has become the norm.

Integral to each family are privacy, dignity and justice. No matter what shifting or altering occurs, these features will be of importance throughout the HIV epidemic. In that they have particular importance to the Judeo-Christian family, each should be discussed.

I. Privacy

Privacy has always been an essential part of the nuclear family,[23] especially persons coming within the historical definition of family.[24] In that privacy sustains the ability to maintain individuality,[25] personhood,[26] procreation,[27] life,[28] and even religious freedom, any effort to subvert privacy should be scrutinized strictly.[29] The fact that the HIV epidemic has killed thousands of people, infected millions, and offers a scandalous future to those already infected with poverty and discrimination should not invite legislative and judicial initiatives on the same scale as those promulgated in Cuba.[30] The end of halting the spread of the disease does not justify denial of fundamental values as a means; among those values is privacy.

The integrity of the family is threatened by *mandatory* testing of persons without a clear and present danger present,[31] although encouragement of voluntary testing with appropriate safeguards to protect the privacy and dignity of those participating should be encouraged.[32] Persons are entitled to privacy even though they are prisoners, hospital patients,[33] sexual partners, soldiers, applicants for marriage licences, infants, and even the most marginalized persons, such as prostitutes, needle-using IV-drug abusers, or the poor. Persons are entitled to even more than privacy; they are entitled to the opportunity for safe and accurate testing, the assurance of counseling,[34] and the dignity of treatment. The Institute of Medicine of the National Academy of Science and the Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic both take the position that "the only mandatory screening appropriate for public health purposes involves blood, tissue, and organ donation."[35]

Inasmuch as the HIV epidemic confronts the world with the historical horror of another plague, with the concomitant irrational fears and totalitarian temptations, so does HIV come at a time when democratic peoples have the opportunity to place law and understanding above discrimination and vengeance. Particularly in regard to the family, all must sense in any deprivation of privacy, an attack upon the integrity and dignity of the Judeo-Christian ideal of the family. Such attacks must be resisted as undemocratic and unacceptable to the pronouncement in the Second Vatican Council that: "Whatever insults human dignity, such as subhuman living conditions, arbitrary imprisonment, deportation, slavery, prostitution, the selling of women and children; as well as disgraceful working conditions, where men are treated as mere tools for profit, rather than as free and responsible persons; all these things and others of their like are infamies indeed."[36]

II. Dignity

Inasmuch as attacks upon privacy through mandatory testing and irrational precautions constitute explicit or implicit attacks upon the integrity of the family, so do overt or passive attempts to subvert employment, insurance coverage, housing, education,[37] legal assistance, or immigration[38] serve as attacks upon the dignity of the person and the integrity of the family. This is especially true when the family is viewed as an economic unit dependent upon oneself or another member[39] for such fundamentals as those items just enumerated.[40] And the fact that HIV has displayed a scandalous predilection for minority groups such as homosexuals, the poor, or hemophiliacs, only heightens the affront to dignity experienced upon the loss of any fundamental for existence.

"An individual's ability to secure gainful employment is critical to that person's right to make choices and maintain a sense of personal dignity."[41] Nonetheless, inattention by legislatures and delay by judicial procedure has denied this dignity to many persons who are HIV-infected.[42] The major obstacle to employment by persons who are HIV-infected is not that there is a lack of legislative or judicial opinions forbidding discrimination against persons with AIDS as ir-



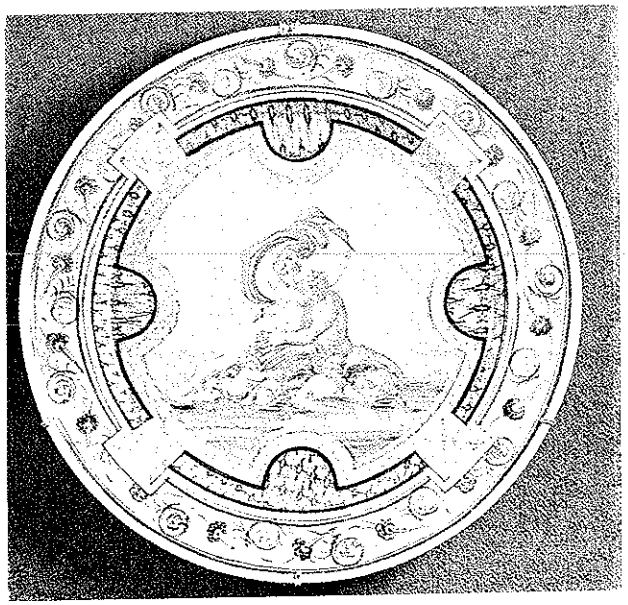
rational,[43] but that too much time is taken to address the issue at the executive,[44] legislative,[45] and judicial levels.[46]

Time consumes resources, insurance coverage, productivity, and a sense of dignity necessary to each person, each member of a family. This inexcusable delay was the finding of Report of the Presidential Commission on the HIV Epidemic in the United States; immediate action at the executive and legislative levels was the conclusion of the Commission.

Because employment is related to a person's ability to do the job, it is appropriate and logical that legislation be promulgated to oppose any discrimination against a person otherwise qualified. Such legislation is for the common good and serves as a promotion of employee and employer interests. Nonetheless, an area where interests collide is insurance coverage: The insured seeks to minimize costs[47] to himself or herself as a result of catastrophic illness, and the insurance carrier seeks to lessen costs by eliminating from coverage those thought to be "at risk.[48]" There is no easy answer to this dilemma, but government must take the lead in development of a comprehensive and coherent national plan that would include: (1) coverage from the time of HIV infection, (2) consideration of relief for the most impacted communities, (3) shared responsibility between public and private sectors, and (4) payment mechanisms that encourage the most cost-effective types of care.[49] And, of course, everyone must take the initiative in preventing the spread of HIV, and in establishing alternative care programs that will sustain human dignity and at the same time provide most cost-effective care.[50]

To safeguard the dignity of persons with HIV and the integrity of the families each person constitutes, anti-discrimination legislation is needed immediately. This should be a priority in every nation. Furthermore, prohibiting discrimination should not be piecemeal; it should be comprehensive and seek to include the subtle forms of discrimination that often defeat the best intentioned legislation. Furthermore, protection of the dignity of the person and the integrity of the family should include an international condemnation of discrimination because:

Discrimination based on an immutable condition like an infection should be so repugnant in our society that it is unconscionable to leave it to the vagaries of state laws; states where people with HIV infection need the greatest protection may afford the least. It is a vital function of law to protect people from the loss of a home, jobs, treatment, education, or other beneficts simply because the person harbors a virus.[51]



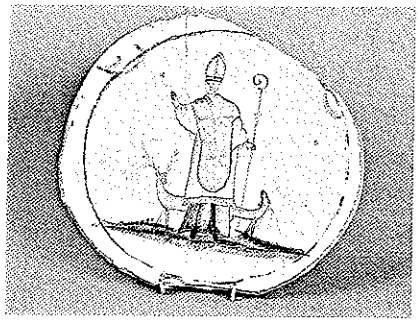
III. Justice

The Second Vatican Council admonished all that, "The demands of justice should first be satisfied, lest the giving of what is due in justice be represented as the offering of a charitable gift.[52]" Medical care falls under the ambit of that admonition, especially as medical care relates to the health and productivity of each member of a family. The integrity of the family demands in justice that immediate attention be paid to a medicine muddle that delays the "compassionate use" of certain drugs;[53] discriminates against communities of women, children and persons of color in drug trials;[54] fails to target high-risk groups for education and prevention;[55] allows through legislation and failure to provide for competitive drugs a costly treatment that can be purchased only by the wealthy;[56] delays increasing the number of drug treatment programs for IV-drug users; hesitates in seeking collaboration between private industry and government to produce a vaccine against HIV.[57]

Justice requires a balance. On the one hand, there is the responsibility of each person to avoid behaviours that will invite infection, the responsibility of each person to participate and mobilize his or her community,[58] the responsibility of each person to participate in medical treatment and discovery. On the other hand, there is the responsibility of each institution to tell the truth, the responsibility of each institution to address subtle and overt discriminatory practices, the responsibility of each institution to be a Good Samaritan.

There is a family in Newark, New Jersey, where a 35 year-old woman thinks AIDS must be hereditary. "Her 42 year-old husband died of the disease. So did her 27 year-old brother and her aunt. Several weeks ago, her terminally ill younger sister was released from New York's Bellevue Hospital after months of treatment for AIDS. Several weeks ago, she developed a throat infection and now

she is a patient on the same floor of the same hospital where her husband died on July 6th. She spends most of her time thinking about how her death will affect their three healthy children, who range in age from 10 to 19.[59]" This is the fact of life in families throughout the world; HIV has certainly affected the integrity of each. But the real challenge is yet to come. The world must now come face to face with the reality that certain drugs—AZT, aerosol pentamidine, and more—can prolong life and, taken early enough, sustain a healthier life for those HIV-infected.[60] But this reality also includes the fact that these drugs are expensive, there are few providers, and most or those in greatest need are those least able to pay. Thus, the essential question facing the integrity of the family today is: Will the wealthy of the world be willing to pay for drugs that are known to be effective to keep the poor, the IV-drug abusers, the prostitutes, the marginalized alive? The cost will be very high.[61]



Conclusion

Plague, suffering, poverty, discrimination, and death are not strangers to history. But, then, neither is opportunity. Today the world confronts an opportunity to address the malevolence of history. Specifically, every man and woman "must take on the renewal of the temporal order as their own special obligation.[62]" This is especially important because the present destructive pattern of the HIV epidemic will affect the integrity of the family. This assault will consist in attemps to destroy the privacy of the family unit, deprive members of the family of the personal dignity each needs to contribute to the whole, and through lack of justice in the allocations of medical care, target those most vulnerable for death.



The HIV epidemic shall have an effect upon the definition of the family, the responsibilities shared by family members, and in some parts of the world, the very survival of many families. But the reality of the situation should not deter us from recognizing the opportunity to work together in the manner of the multi-national tapestry that we are.

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[1] Matt. 5:45 (new American Bible).

[2] *See e.g. A History of the United States' Response to Epidemics, Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic* [hereinafter *Presidential Commission*] 161-170 (1988) (Report chronologically lists and describes epidemics in the United States from 1633 to 1981). For the special burden of the poor, *see* Job 24:2-12 (New American Bible): "They are drenched with the rain of the mountains, and for want of shelter they cling to the rock." *Id.* at 8.

[3] See CDC, 30 Morbidity and mortality weekly report [MMWR] 305 (1981) (first official report of Kaposi's sarcoma); articles by Dr. MICHAEL GOTTLIEB about pneumocystis carinii pneumonia in homosexual men and by Alvin FRIEDMAN-KIEN on Kaposi's sarcoma in the *New England Journal of Medicine*, identified the disease with homosexuals. Popular literature developed the identification. *See e.G.* P. REED. *Facing it* (1984); B. PEABODY, *The screaming room* (1986); R. SHILTS, *And the band played on* (1987); C. DAVIS, *Valley of the shadow* (1988); P. MONETTE, *Borrowed time* (1988); D. FEIBERG, *Eighty-sixed* (1989); L. KRAMER, *Reports from the holocaust* (1989).

[4] OKIE, *AIDS Shifts to Drug-Plagued Inner Cities*. WASH POST, Aug. 27, 1989, A3, col. 1. Estimates are that about "1 2 million people carry the virus and that more than half of those are black or Hispanic." *Id.* According to HAROLD JAFFE, Centers for Disease Control, AIDS will increasingly become a disease of the inner cities, of IV-drug abusers, their sexual partners and children, and of poor black and Hispanic persons. *See* also CDC, *AIDS and the Human Immunodeficiency Virus Infection in the United States:* 1988 Update, 38 (S-4) MMWR 3 (1989) (blacks, Hispanics and women form seventy-five percent of HIV cases today); U.S. Cong. House of Rep., Select Comm. on Nar. Abuse and Control, *Intravenous Drug Use and Aids: The Impact on the Black Community*, 1-129 (1988); FRIEDMAN, et al., *The AIDS Epidemic Among Blacks and Hispanics* 65 (S-2) Milbank quarterly 455-499 (1987).

[5] *See e.g.* CORTES, et al. *HIV-1, HIV-2,* and *HTLV-1 Infection in High-Risk Groups in Brazil,* 320 N.E.J.MED. 953-8 (1989) (Concluding that in Brazil, HIV-1 infection is already well established among homosexuals, bisexuals, and lower-class female prostitutes, with bisexual men probably acting as a bridge between the heterosexual and homosexual communities, that HTLV-I infection is prevalent in groups at risk for AIDS, and that HIV-2 infection has already been introduced into the country); *WHO Seeks Global Data on Sexual Practices*, 244 *Science* 418 (1989) (20 countries will be involved in a sexual practices survey in order to ascertain any common elements among persons with HIV); Heise, *AIDS: New Threat to the "Third World,"* World Watch 19 (1988); PIOT, *AIDS: An International Perspective,* 239 *Science* 573-9 (1988) (In Europe and America, HIV-1 has occurred among homosexual men and intravenous drug abusers; in Africa HIV-1 occurs in heterosexual contexts, but aided by factors that can increase susceptibility); MANN, *AIDS: A Global Perspective*, 319 N.E.J.MED. 302-9 (1988) (factors such as risk behavior, cultural evolution, political unrest and economic disruption may affect the spread of HIV).

[6] United Nations Centre for Human Rights, World Health Organization, International Consultation on AIDS and Human Rights *Final Document. Aids and Human Rights* 5 (July 26-28, 1989). Poverty is another condition inviting HIV infection, such as in:"south and east Asia, where an estimated 500 million people,

or 40 percent of the population suffer from malnutrition.... [and] in sub-Saharan Africa, where malnutrition and disease ... affect 30 percent of the population, or 160 million people" OKIE, *Health Crisis Confronts* 1 3 Billion, "Wash. Post," Sept. 25, 1989, Al, col 5;

[7] The infestation is scandalous because it is an added burden upon those already marginalized, through poverty, despair, existent disease such as syphilis, tuberculosis, or measles, or victimized because of race or sexual orientation. *See Interaction With Other Infections is Becoming Clearer,* 117 "New Scientist" 34 (1988) (In Africa, diseases such as TB, malaria, and leprosy that had been brought under some control are beginning to spread again and the reason may be HIV); GLATT, CHIRGWIN & LANDESMAN, *Treatment of Infections Associated with Human Immunodeficiency Virus,* 318 N E J MED 1439-2448 (1988); CDC, *Human Immunodeficiency Virus Infection in the United States: A Review of Current Knowledge,* 36 (S-6) MMWR 1-48 (1987) (describes shift in HIV from white homosexual men to lowest socioeconomic brackets); CDC, *AIDS and the Human Immunodeficiency Virus Infection in the United States*: 1988 Update, 38 (S-4) MMWR 4 (1989) (as the American case definition of HIV changes, the number of blacks and Hispanics increases); BLENDON & DONELAN, *Discrimination Against People with AIDS: The Public's Perspective,* 319 N E J MED. 1022- 1026 (1988)

[8] Within the Hebrew scripture, "family is the smallest social unit beneath the clan and the tribe." MCKENZIE, *Dictionary of the Bible* 273 (1965). Family included all those of the same blood or who lived in a common dwelling, such as the husband and father, the head of the family, his wife or wives and concubines, his children, slaves or retainers, clients or resident aliens, widowed or expelled daughters, and unmarried adult sons or daughters. *Id.* References are also made to the family in the New Testament *See e.g.* Mark 3:21, 5:19; Luke 9:61 12:52; John 7:42, 8:35; Acts 4:6. 7:13. 7:14, 10:2, 16:33, 16:34; Galatians 6:10; Ephesians 3:15; I Timothy 3:4, 3:5, 5:4, 5:8, 5:16; Hebrews 2:11, 11:7;and I Peter 4:17. For secular definitions in the family see text associated with notes 12-22 *infra.*

[9] CDC, *AIDS and the Human Immunodeficiency Virus Infection in the United States.* 1988 Update, 38 (S-4) "MMWR" 4 (1989); CDC, Update: *Acquired Immunodeficiency Syndrome—United States* 1981-1988, 38 MMWR 230 (1989) Use of the term "AIDS" has also led to confusion and admission by the United States Commission on the HIV Epidemic in the United States [hereinafter *Presidential Commission*] to conclude that:

"The term AIDS is obsolete. HIV infection more correctly defines the problem. The medical, public health, political, and community leadership must focus on the full course of HIV infection rather than concentrating on later stages of the disease (ARC and AIDS) Continual focus on AIDS rather than on the entire spectrum of HIV disease has left our nation unable to deal adequately with the epidemic. Federal and state data collection efforts must now be focused on early HIV reports, while still collecting data on symptomatic disease" *Presidential Commission XVII* (1988).

[10] "Heterosexual acquired AIDS in the United States has been focused in demographically discrete population groups" CDC, *AIDS and the Human Immunodeficiency Virus Infection in the United States*: 1988 Update. 38 (S-4) "MMWR" 3 (1989). These population groups are women (75%), blacks and Hispanics (70%), and partners of IV-drug-abusers (71%). *Id.* In short, unlike Africa, heterosexual transmission is almost always among minority persons and has not entered into the majority of heterosexually active persons. Reasons for this abound: see BOOTH, *Heterosexual AIDS: Setting the Odds,* 240 "Science" 597 (1988) (for a couple who tests negative and have no history of high-risk activity, the odds of infection are one in 500 million); FRANCE et al. *Heterosexual Spread of Human Immunodeficiency Virus in Edinburgh,* 296 "British Med" J. 526-529 (1988) (the major risk factor identified in the study was being a regular sexual partner of an intravenous drug abuser for at least eighteen months); HEARST & HULLEY, *Preventing the Heterosexual Spread of AIDS: Are We Giving Our Patients the Best Advice?* 259 JAMA 2428-2432 (1988) (use of condoms and the avoidance of anal intercourse will help reduce the risk, but knowledge of the partner's sexual habits is the main factor); PETERMAN et al *Risk of Human Immunodeficiency Virus Transmission from Heterosexual Adults With Tranfusion- Associated Infections,* 259 "JAMA" 55-58 (1988) (of 80 heterosexual patients who had contracted the disease through blood transfusions, 8% of the husbands and 18% of the wives tested positive. Rates of sexual contact did not correspond to rates of infection)





[11] *See e.g.* L. KRAMER, *Reports from the Holocaust: The Making of an Aids Activist* (1989) (an account of the political difficulties encountered by gay and lesbian persons in the United States concerning AIDS); NAT ACADEMY OF SCIENCE, *A Common Destiny. Blacks and American Society (1989) (a study of blacks in the United States) For a discussion of the tension in America over political rights for homosexuals, see* SUNSTEIN, *Sexual Orientation and the Constitution: A Note on the Relationship between Due Process and Equal Protection,* 55 CHI. L. REV. 1161, 1176 n 79 (1988) (author discusses the fact that gays and lesbians are subject to widespread social hostility "As a result, disclosure of homosexuality creates a series of risks of social sanctions, ranging from various forms of social ostracism to dismissal from employment and private violence. It is for this reason, among others, that the exercise of political power by gays and lesbians is unusually difficult." *Id.; See also* ACKERMAN, *Beyond Carolene Products,* 98 "Harv. L. Rev." 713, 728-31 (1985); Ely, *Democracy and Distrust* at 162-64 (1980).

[12] In 1984, there were six bills introduced into American state legislatures concerning AIDS; by 1987 there were over 550. *AIDS and State Policy,* "Aids, law Reporter", Apr. 1988 at 3. The Report of the Presidential Commission recommended many legislative initiatives, but they have not come about. *See White House Earns Black Marks for AIDS policy,* 118 "New Scientist" 34 (1988) (New laws should be enacted to protect against AIDS discrimination and to protect confidentiality); THOMPSON, *Frank Talk About the AIDS Crisis,* 131 TIME 53 (Jun 13, 1988) (Report is critical of the Reagan administration); Rovner, AIDS Expert Urges Antidiscrimination Law, 46 Cong Quarterly W Rept. 1496 (1988)

[13] *See* JONES V. HALLAHAN, 501 "s.w." 2d 588 (ky. 1973); SINGER V HARA, 11 "Wash. App. 247," 522 P.2d 1187 (1974) (male couple argued that the Washington State Equal Rights Amendment prevented the state from denying persons of the same sex the ability to marry, but the court responded that same sex marriages were not within the definition of marriage); Annot., 63 A.L.R. 3d 1199 (1975); NOTE, *The Legality of Homosexual Marriage,* 82 "Yale" L.J. 573 (1973) Some states specify that

marriage is reserved to a man and woman. *See e.g. TEX. FAM. CODE* 1.01 (Vernon 1989): "A man and a woman desiring to enter into a ceremonial marriage shall obtain a marriage license from the county clerk of any county of this state. A license shall not be issued for the marriage of persons of the same sex."

[14] Note that American gay and lesbian persons are divided on the issue of the desiderability of marriage. *See* T. STODDARD, *Why Gay People Should Seek the Right to Marry*, "Outlook" 8 (Fall 1989) (arguing that marriage provides economic and practical advantages, and should be sought as a *right*); *but see* P. ETTELBRICK, *Since When Is Marriage A Path To Liberation*, "Outlook"8 (Fall 1989) (arguing that the right to marry will force homosexuals into another confining institution which emphasizes property and exclusion)

[15] *See* YEN, *Court Adds Gay Couples to Definition of Family*, "Wash Post.", July 7, 1989, A3, col. 3; *Koch Grants Benefits for "Domestic Partners,"* "Wash. Post", Aug. 8, 1989, A6, col. 1 (order covers benefits traditionally associated with married couples: health, bereavement leave policy, and death benefits). San Francisco's Board of Supervisors approved a domestic partners law that would allow homosexual and heterosexual partners to register with the city for a fee of 2 5.00. Voters immediately demanded a referendum. *See* Gorney, *Protest Impedes "Partners" Law*, "Wash Post" July 7, 1989, DI, col. 1

[16] In the United States during 1986, it is estimated that 2 2 million couples were sharing a home without any form of marriage. U S Bureau of Census, Dept. of Commerce, *Current Population Reports, Households, Families, Marital Status and Living Arrangements* 2 (1986) *See generally* R. O'BRIEN, *AIDS. Perspective on the American Family*, 34 "Vill. L. Rev." 209, 248-252 (1989):

[17] *See generally* FINEMAN, *Law and Changing Patterns of Behavior. Sanctions on Nonmarital Cohabitation*, 1981 "Wis. L. Rev." 275 (discussing the legal system's response to cohabitation); KAY & AMYX, MARVIN v. MARVIN: *Preserving the Options*, 65 "Calif. L. Rev." 937 (1977); REPPY, *Property and Support Rights of Unmarried Cohabitants: A Proposal for Creating New Legal Status*, 44 "La. L. Rev." 1677 (1984); YOUNGER, *Marital Regimes: A Story of Compromise and Immoralization, Together With Criticism and Suggestions for Reform*, 67 "Cornell L. Rev." 45 (1981); Annotation: Property Rights Arising from Relationship of Couple Cohabiting Without Marriage, 3 "A.L.R." 4th 13 (1979).

[18] Domestic partnership cases are currently pending in American courts. *See* LEMPA EQUITIES, LTD. V. COLLINS, AND COLLINS V. NEXT WEST MANAGEMENT, INC., both announced in Lambda Legal Defense and Education Fund, Inc. 6 "Lambda Update" 11 (1989). Any significant change in the definition of the family will come from the state legislatures. VILLAGE OF BELLE TERRE V. BORAAS, 416 U.S. 1, 9 (1974); TOWN OF DURHAM V. WHITE ENTERPRISES, INC., 115 N.H. 645, 348 A2d 706 (1975).

[19] It is conceivable that persons who have been marginalized within society—poor, minorities, and the diseased—may elect to ignore institutional structures and seek economic and societal support through alternative, localized networks. This was the initial response of the gay and lesbian community in America. Blacks and Hispanics have a long history of working outside of institutional America. *See A Common Destiny* at 453-4; Paper prepared for the Committee on the Status of Black Americans, Nat. Research Council, Wash. D.C. (1987); KLUEGEL & SMITH, *Beliefs About Equality: American Views of What Is and Ought to Be* (1986); BELL, *Race, Racism and American Law* (1980); HIGGINBOTHAM, *In the Matter of Color* (1978); MAGNUM, *The Legal Status of the Negro* (1940).





[20] "The family as an institution experienced developments during the settlement and the monarchy which were not entirely wholesome. It was no longer a self-sufficient, independent unit. Its size was limited by the economic conditions of life in cities and villages." J. MCKENZIE, *Dictionary of the Bible* 273 (1965); *see also* B. TUCHMAN, *A Distant Mirror* (1978) (description of the Black Plague during the 14th Century).

[21] For an example of the Hebrew idea of family, *see* fn 8 *supra*; a Christian ideal is presented in the documents of Vatican II. *See* W. ABBOTT, *The Documents of Vatican II* (1966) "The family is the school of those social virtues which every society needs." *Id.* at 641, *Declaration on Christian Ethics*; "The family is the foundation of society. In it the various generations come together and help one another to grow wiser and to harmonize personal rights with the other requirements of social life" *Id.* at 257, *Pastoral Constitution on the Church in the Modern World*; "The Christian family, which springs from marriage as a reflection of the loving covenant uniting Christ with the Church, and as a participation in that covenant, will manifest to all men the Savior's living presence in the world, and the genuine nature of the Church. This the family will do by the mutual love of the spouses, by their generous fruitfulness, their solidarity and faithfulness, and by the loving way in which all members of the family work together" *Id.* at 252, *Pastoral Constitution on the Church in the Modern World*.

[22] *Id.* at 503, *Decree on the Apostolate of the Laity*. Particular attention to be paid to the fact that HIV scandalously affects racial minorities—and their children—in America. *See* Institute of Medicine/National Academy of Sciences, *Confronting Aids* 52 (1988):

AIDS cases occur in higher proportions in Black and Hispanic populations (on the West Coast, the proportion is 3 times higher in black and Hispanic than in white populations and 12 times higher on the East Coast), mainly as a result of higher HIV prevalence in black and Hispanic drug abusers and their sexual partners and offspring. Recent data also suggests that the virus is spreading more rapidly among blacks and Hispanics at risk than among other population groups, especially in Northeastern cities, suggesting that the future composition of AIDS cases will consist primarily of poor, urban minorities.

[23] American courts have interpreted the United States Constitution to include a right to privacy that particularly applies to the family. *See* GRISWOLD V. CONNECTICUT, 381 U.S. 479, 485-6 (1965) (invalidating state statutes prohibiting the use and distribution of contraceptive devices to married persons. Such use and distribution was based in the right to privacy discerned in the "penumbras" of the first, third, fourth, fifth, and ninth amendments. *Id.* at 484). Seven years later, the Court extended its holding to protect the use and distribution of contraceptive devices to unmarried persons. "If the right of privacy means anything, it is the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child." EISENSTADT V. BAIRD, 405 U.S. 438, 453 (1972).

[24] *See* SUNSTEIN, *Sexual Orientation and the Constitution. A Note on the Relationship Between Due Process and Equal Protection*, 55 "Chi. L. Rev." 1170-1171 (1988): "For purposes of the due process, the baseline for inquiry has tended to be common law, Anglo-American practice, or status quo." *Id.* at 1171. "The clause has been associated with a particular conception of judicial review, one that sees the courts as safeguards against novel developments brought about by temporary majorities who are insufficiently sensitive to the claims of history." *Id.* at 1163. *See e.g.* WEBSTER v REPRODUCTIVE HEALTH SERVICES, 57 LW 5023 (Jun. 27, 1989): "[t]he goal of constitutional adjudication is surely not to remove inexorably 'politically divisive' issues from the ambit of the legislative process, whereby the people through their elected representatives deal with matters of concern to them." *Id.* at 5031

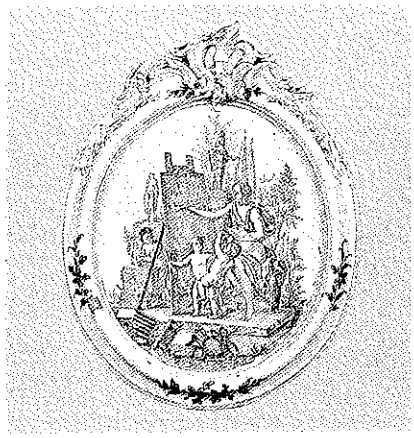
[25] For a discussion of individuality from the perspective of employment, insurance, and self-maintenance, *see* R. O'BRIEN, *AIDS: Perspective on the American Family, 34* "Vill. L. Rev." 209 225-237 (1989); R. O'BRIEN, *AIDS and the Family*, In DORNETTEZ *Aids and the Law* 90-106 (1987)

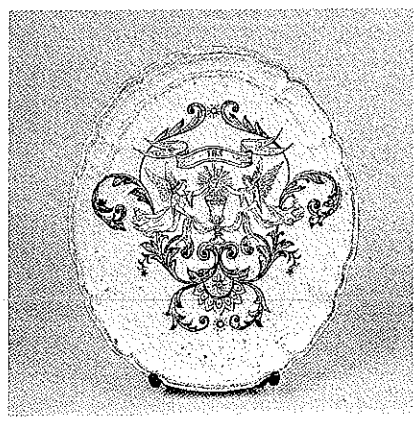
[26] *See* BOWERS v. HARDWICK, 478 U.S. 186 (1986) (Blackmun, J. dissenting): " We protect the decision whether to have a child because parenthood alters so dramatically an individual's self-definition." *See generally* RUBENFELD, *The Right of Privacy*, "Harv. L. Rev." 737 (1989); L. TRIBE, *Am. Constitutional law*, 13-15 at 943 (1st Ed. 1978); P. FREUND, *Address to the American Law Institute* (May 23, 1975); CRAVEN, *Personhood: The Right To Be Let Alone*, 1979 DUKE L. J. 699; REIMAN, *Privacy, Intimacy, and Personhood*, 6 PHIL. & PUB. AFF. 26 (1976); WASSERSTROM, *Privacy. Some Arguments and Assumptions*, "Phil. Dimen. of Privacy" 317 (Schoeman ed. 1984); Note, *Personhood and the Contraceptive* Right, 57 IND. L. J. 579 (1982); GERETY, *Redefining Privacy*, 12 "Harv. C.R.C.L.L. Rev." 233 (1977)

[27] A woman's right to privacy in her body's reproductive organs took precedence over the state's interest in restricting abortions in ROE v WADE, 410 U.S. 113 (1973). *But see* WEBSTER v. *Reproductive Health Services*, 57 LW 5023, Jul. 3, 1989 (J. Scalia, concurring in part and concurring in the judgement), specifically seeking to overturn *Roe*. *Id.* at 5034-35 J. Stevens, concurring in part and dissenting in part, quoting extensively from St. Thomas Aquinas to find that the Missouri statute defining life at conception violates the Establishment Clause of the First Amendment. *Id.* at 5045.

[28] *See* G. SMITH, *All's Well That Ends Well. Toward a Policy of Assisted Rational Suicide or Merely Enlightened Self-Determination?* 22 "U.C. Davis L. Rev." 275-419 (1989)

[29] But there is no current effort in the United States to raise homosexual rights of privacy to the level of strict scrutiny. BOWERS v HARDWICK, 478 U.S. 197 (1986) (BURGER, C.J. concurring: "To hold that the act of sodomy is somehow protected as a fundamental right would be to cast aside millennia of moral teaching." *See also* SAN ANTONIO INDEPENDENT SCHOOL DISTRICT v RODRIQUEZ, 411 U.S. 1, 33-34 (1973) (limiting the fundamental rights branch of equal protection to the matters explicitly or implicitly guaranteed by the Constitution); BEN-SHALOM v. MARSH, 58 LW 2118, 2119 (1989): "We do not see that the new regulations [denying a homosexual the right to reenlist in the Armed Forces] embody gross unfairness in the conduct of the military so inconsistent with equal protection as to be termed 'invidious'"





[30] Cuba has instituted a program of mandatory testing and subsequent possible quarantine that will eventually include all of its population BAYER & HEALTON, *Controlling AIDS in Cuba, 320* "N. E. J. Med." 1022-1024 (1989). A growing number of states in the United States specifically or implicitly require reporting of HIV-positive results. *See e.g.* statutes in Arizona, Colorado, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Montana, Oklahoma, Rhode Island, South Carolina, Texas, Utah, Virginia, Wisconsin, and Wyoming. GOSTIN, *Public Health Strategies for Confronting AIDS*, 261 "JAMA 1622-3" (1989)

[31] Prisons offer particular issues in regard to mandatory testing. As of November 1988, fourteen states and the Federal Bureau of Prisons had mass-screening programs for new or current inmates or releasees. Numerous state prison systems segregate all prisoners with AIDS (20 states), demonstrating symptoms (8 states), or HIV-positive (6 states). HAMMET, *Update 1988: Aids in the Correctional Facilities* (1989 2Ed.). In a case of first impression, the U.S. Court of Appeals for the Tenth Circuit declared that there is no Fourth Amendment impediment to a state prison's policy of mandatory blood-testing all inmates for HIV since this is a "special need" and a person "has only a limited privacy interest in not having his [or her] blood tested." DUNN v. WHITE, CA 10, No. 88-2194, Aug. 1, 1989, 58 LW 1036 (Aug. 29, 1989); *see also* TREASURY EMPLOYEES v. VON RAAB, 57 LW 4338 (1989); SKINNER v RAILWAY LABOR EXECUTIVES ASSOCIATION, 57 LW 4324 (1989)

[32] Because knowledge of HIV status can definitely protect the health of a sexual partner and has been proven to increase dramatically the chance of survival for the person infected, voluntary testing is highly recommended. *See* CHATIS, MILLER, SCHRAGER & CRUMPACKER, *Successful Treatment With Foscarnet of an Acyclovir-Resistant Mucocutaneous Infection with Herpes Simplex Virus in a Patient With Acquired Immunodeficiency Syndrome*, 320 N. E. J. MED. 297 (1989); RHAME & MAKI, *The Case for Wider Use of Testing for HIV Infection*, 320 N. E. J. MED. 1248 (1989); SPECTER, *AZT Found to Delay Onset of Aids; Treatment Urged for Up to 650,000*, "Wash. Post," Aug. 18, 1989, A1, col. 3. Minority access to health care must also be taken into consideration in voluntary testing. *See* DAVIS & LILLIE-BLANTAON, *Health Care for Black Americans: Trends in Financing and Delivery. Paper Presented for the Committee on the Status of Black Americans, National Research Council*, Wash, D.C. (1987); DAVIS et. al., *Health Care for Black Americans. The Public Sector Role, Currents of Health Policy: Impact on Black Americans, Part I. 65* "Milbank Quarterly" (supp.) 213-247 (1987). And then who will pay for treatment FARLEY, *Who Are the Underinsured?* 63(3) "Milbank Memorial Fund Quarterly/Health and Society" 476-503 (1985).

[33] *See* gen. 39A C.J.S. "Health & Environment" 18 (1976); 39 AM. JUR. 2d HEALTH 26 (1968); for state reporting requirements, *see e.g.* Ariz. Rev. Stat. Ann. 36.621 to 36.623 (1986); Cal. Health & Safety Code 3122, 3124-25 (West 1979); Colo. Rev. Stat. 25-1-647, 25-1-649, 25-4-402 (1982); EICKHOFF, *Hospital Policies on HIV Antibody Testing*, 259 JAMA 1861-1862 (1988); O'CONNOR & KINGMAN, *The Trouble With Testing*. 117 "New Scientist" 60-63 (1988); LEWIS, *Aids Policy*, 8594 "Lancet" 1118 (1988)

[34] Counseling is important because suicide rates are higher in persons with chronic and life-threatening diseases than in the general popu-

lation. The rate for men aged 20-59 with HIV was 36 times higher than those without HIV, and 66 times that of the general population. The rate is higher in New York City. *See* MARZUK, ET AL , *Increased Risk of Suicide in Persons With Aids*, 259 "JAMA 1333-1337" (1988); *Glass, Aids and Suicide*, 259 JAMA 1369-1370 (1988).

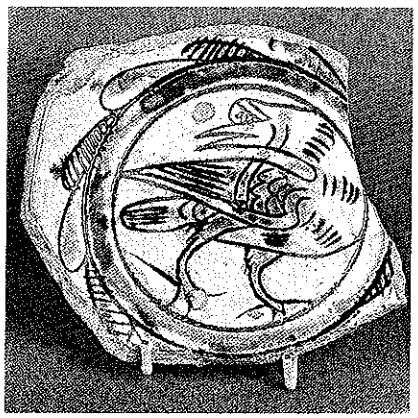
[35] Institute of Med./Nat. Academy of Sciences, *Confronting Aids: Update 1988* 10 (1989); the American Bar Association supports federal legislation that would promote voluntary HIV testing and counseling, provide confidentiality protection for information obtained through testing and counseling, and prohibit discrimination against an individual because of actual or perceived HIV status in regard to employment, housing, public accommodations or government services. *See* ABA, *Aids: The Legal Issues 97-98* (August 1988); Report No. 115A, American Bar Association, Summary of Action of the House of Delegates, 1988 Mid-Year Meeting, 26-27 (Feb. 8-9, 1988).

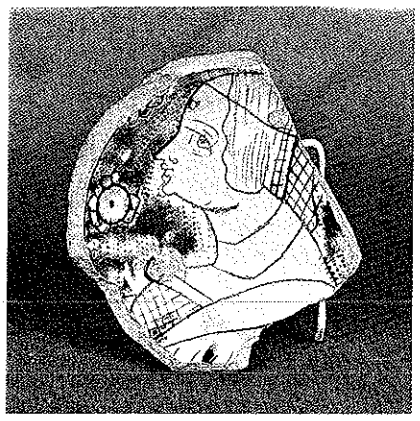
[36] ABBOT (ed.), *The Documents of Vatican II* 226 (1965).

[37] Several major school cases involving HIV have been decided *See* MARTINEZ V. SCHOOL Board, 692 F. Supp. 1293, 1305 (M.D.Fla 1987) (court would not order a child into the classroom when the child's original treating physician recommended against it because the child was retarded, incontinent and drooling); DOE V BELLEVILLE PUBLIC SCHOOL DIST., 672 f Supp. 342, 344-45 (S.D. il. 1987) (child with AIDS not handicapped under the Federal Education for All Handicapped Children Act unless physical condition impairs educational performance); RAY V. SCHOOL DIST 666 F. Supp. 1524 (M.D. Fla. 1987) (court ordered three brothers admitted to school so long as behavior not a health threat to others); THOMAS V. ATASCADERO UNIFIED SCHOOL DIST, 662 F. Supp. 376 (C.D. Cal. 1987) (child with AIDS bit another child's pants leg during a fight but did not break the skin; judge ruled that the child must be readmitted to school since there was no evidence that the child posed a health threat to others); BOGART V WHITE, No. 86-144, slip op. (Cir. Ct. Ind., Apr. 10., 1986) (twelve-year-old allowed to return to school even though state statute saying person with communicable disease could not attend; appeals court held child not infectious; DIST. 27 COMMUNITY SCHOOL BOARD V BOARD OF EDUCATION, 130 misc.2d 398, 502 N.Y.S. 2d 325 (Sup. Ct. 1986) (names of children with AIDS could be kept private since children did not pose a health threat).

[38] The American Bar Association AIDS Coordinating Committee "is opposed to restricting travelers, students and other non-immigrant visitors with HIV for two reasons. First, such a bar would invite retaliation by other countries... [and] second, restrictions based on HIV status would be virtually impossible to enforce, especially in the case of travelers" ABA, *AIDS Coordinating Committee, Discussion* Draft, *AIDS: The Legal Issues* 85-90 (1989) Nonetheless, even though the American Bar Association does not think HIV status alone should bar immigrants seeking to reside permanently in the United States, it does suggest excludability could be accomplished through other existent grounds such as "likely at any time to become public charges" *Id.* at 90.

[39] A current description of persons with AIDS in the United States would include the following: Most HIV-positive persons are between 17 and 55 years of age, an age span that constitutes 55% of the population. With a male-to-female predominance prevalence typically of at least 4 to 1 the prevalence rate might be expected to range from 1.2% to 1.8% for men and from 0.3% to 0.4% for women. Data from childbearing women range from 0.1% in California, Colorado, Michigan, New Mexico, and Texas to 0.2% in Massachusetts, 0.5% in Florida and New Jersey, and 0.7% in New York. The ratio of AIDS case incidence is 3.2 to 1 for blacks and 2.8 to 1 for Hispanics compared to whites CDC, *AIDS and Human Immunodeficiency Virus Infection in the United States: 1988 Update*, MMWR (S-4) 11 (1989).





[40] *See also* CONGREGATION FOR CATHOLIC EDUCATION *Guidelines for the Study and teaching of the Church's Social Doctrine in the Formation of Priests 43-44* (1988): "The principles for reflection of the Church's social doctrine, as laws governing social life, are not independent from real recognition of the fundamental values inherent in the dignity of the human person These values are principally: truth, freedom, justice, solidarity, peace and charity or Christian love.. Reference must therefore be made to them in order to bring about substantial reforms of economic, political, cultural and technological structures and the necessary changes in institutions"

[41] R. O'BRIEN, *AIDS. Perspective on the Family*, 34 "Vill. l Rev." 225 (1989); *see* also Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic, June 24, 1988 at 111-113; American Bar Association,Draft Policy Recommendations for the AIDS Coordinating Committee, 1989; Institute of Medicine/National Academy of Sciences, *Confronting Aids* 80-81, 100-101 (1989), Cal.Const. art. I, sec. 1: "All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing and protect-ing property, and pursuing and obtaining safety, happiness, and privacy"

[42] Not all have delayed in implementing policies forbidding discrimination. *See Creating an AIDS Policy: One Law Firm's Positive Experience*, "Aids Law Rep", Dec. 1987, at 1; The Many Faces of AIDS: A Gospel Response, 17 "Origins" 481 (1987) *But see* LEONARD, *Employment Discrimination Against Persons With AIDS*, 19 "Clearinghouse Rev." 1292, 1296 (1986); When Employers Fire Out of Fear, "Aids Law Rep.", Oct. 1987, at 1; Note, *Education Through the Law: The Los Angeles AIDS Discrimination Ordinance*, 33 UCLA L. REV 1410 (1986); GOFF, *AIDS: The Legal Issues*, 2 WASH LAW. 36, 36-38 (1988); LYONS, *The Department of Justice: Dealing with a Constellation of Problems*, 7 DEL. LAW. 71 (1988); STEINHILBER, *AIDS and Employment: Legal and Policy Considerations*, 35 "Fed. B. News" 377 (1988); ARLINE V. SCHOOL BOARD, 480 U.S. 273 (1987) (Finding that a teacher was otherwise qualified under a Federal Rehabilitation Act. and could not be denied employment).

[43] Some particular precautions are recommended for certain employees. *See Occupationally Acquired HIV Infections in Laboratories Producing Virus Concentrates in Large Quantities*, CDC, 37 MMWR 19-20 (1988) (health care workers); CDC, 37 MMWR (S-1) 1- 13 (1988) (school personnel); CDC, *Recommendations in Prevention of HIV Transmission in Health Care Settings*, 36 (S-3) MMWR 35-78 (1987) (health care workers); CDC, 35 MMWR 237-41 (1986) (dental workers); CDC, 34 MMWR 681 (1985) (service personnel such as barbers and hairdressers)

[44] *See* Memorandum from Douglas W. KMIEC, Assistant Attorney General, to ARTHUR B. CULVAHOUSE, Jr. Counsel to the President (Sept. 27, 1988) (discussing the application of

the Federal Rehabilitation Act to HIV-infected persons).

[45] It was not until 1988 that the Civil Rights Restoration Act of 1987 provided that protection against discrimination for persons who are not a direct threat and able to perform the duties of the job. *See Civil Rights Restoration Act of 1987*, Pub. L. No. 100-259, 9, 102 Stat. 28, 31-32 (1988); and not until 1989 that the House of Representatives of the United States Congress passed a bill to establish a clear and comprehensive prohibition of discrimination on the basis of disability. *See Americans With Disabilities Act of 1989*, H.R. 2273 (1989)

[46] *See* ABA, *AIDS: THE LEGAL ISSUES 156-164* (1988)

[47] A survey by the National Public Health and Hospital Institute examined 623 acute-care hospitals; 322 responded. In this most recent study, two hundred seventy-six hospitals reported treating persons with AIDS for an average length of stay of 16.8 days. Cost per patient per day was 6 81, and revenues per patient per day was 5 45; cost for each patient for one year was I 7,910. Estimated total cost for AIDS in-patient care during 1987 was 4 86 million, with Medicaid the primary payer. 1987 *U.S. Hospital AIDS Survey*, 262 JAMA 784 (1989)

[48] In the United States, a country without socialized medicine, almost all insurance companies now refuse to insure individual health insurance applicants with HIV symptoms: 91 percent refuse to insure those who are HIV-positive; health insurance companies "screen" applicants for individual and small group insurance policies by including AIDS-related questions on the application, but to date companies do not question individuals covered under employment-related group policies. Institute of Medicine/National Academy of Sciences, *Confronting Aids: Update 1988* 112-113 (1989); *See also* BLOOM & CARLINER, *The Economic Impact of AIDS in the United States*, 239 SCIENCE 604-610 (1988) (some states have enacted statutes prohibiting HIV questions or testing by insurance companies, but the companies can then refuse to provide policies or limit coverage).

[49] Institute of Medicine/National Academy of Sciences, *Confronting Aids: Update 1988* 17 (1989) The problem in the United States is dramatized in the proposals of persons such as Dr David Axelrod, of Health Commission for the State of New York, who has proposed a plan to provide health insurance to the 2.5 million New Yorkers who have none by requiring all businesses to provide coverage to their employees and by using up to I billion from a "bad debt and charity pool" for uninsured people. Verhovek, N.Y. TIMES, Sept. 7, 1989, I. col. 1; and in the Nation's Capital, *see* ABRAMOWITZ, D.C *Seeks Way to Provide Care for Uninsured*, WASH. POST, Sept. 24, 1989, D1, col. 4 (examining proposals to provide health care coverage for more than 100,000 residents who are without any type of insurance and are unable to pay for medical care).

[50] *See e.g.* JUDSON & VERNON, *The Impact of AIDS on State and Local Health Departments: Issues and a Few Answers*, 78 AM. J. PUB. HEALTH 387-93 (1988) (impact of the disease is varied geographically and so is the response); RICHLAND, *Role of State Health Agencies in Responding to AIDS*, 103 "Pub. H. Repts." 267-72 (1988) (political issues sometimes weigh more heavily than health issues in making decisions about AIDS); KAWATA & ANDRIOTE, *NAN: A National Voice for Community-Based Services to Persons with AIDS*, 103 PUB. H. REPTS. 299-304 (1988) (community-based response can best care for HIV-infected persons).





[51] GOSTIN, *Public Health Strategies for Confronting AIDS*, 261 JAMA 1628 (1989) (while the quote refers to American states and the need for federal legislation, the application to nation-states is clearly applicable).

[52] ABBOTT (Ed.), *The Documents of Vatican II* 499 (1965). Justice and dignity are intertwined: "The freedom and dignity of the person being helped should be respected with the utmost delicacy, and the purity of one's charitable intentions should not be stained by a quest for personal advantage or by any thirst for domination." *Id. See generally* HAUGHEY (ed.), *The Faith That Does Justice* (1977)

[53] *See* Committee on Government Operations, 100th Congress, *Aids Drugs: Where Are They?* 6-33 (1988), finding that: (1)The National Institute of Allergy and Infectious Disease (NIAID) clinical trials, have been unduly delayed, denying access by HIV-infected persons to potentially therapeutic drugs; (2) the Federal government has failed to recognize the dual roles of clinical trials which are scientific research *and* treatment of life-threatening illnesses; (3) IV-drug users, women, children, and persons of color are being denied access to experimental treatment. See also Report of the Presidential Commission on the HIV Epidemic 37-64 (1988); SQUIRES, *Opening the Channel for New AIDS Drugs*, "Wash. Post Health", Mar. 1, 1988, 6, col. 1; KAZMAN, *Protected to Death*, WASH. POST Jul. 16, 1989, B5, col. 1 (The FDA kept beta-blockers for angina out of the country long after they became available elsewhere and, according to George Hitchings, co- winner of the 1988 Nobel Prize in medicine, the FDA's five year delay in approving the drug Septra cost 80,000 lives).

[54] Committee on Government Operations at 24-25; Presidential Commission at 54-64 (specific mention is made of inner-city neighborhoods, shelters and racial minorities). The American Foundation for AIDS Research (AmFAR) publishes a directory of clinical trials; the National Institute of Allergy and Infectious Diseases publishes an educational pamphlet designed for those considering participation in a clinical trial: *see Clinical Trials–Talking It Over*, NIAID, Office of Communications, Nat. Inst., of Health, Building 31 Room 7A32, Bethesda, Md. 20892 USA; and information about AIDS/HIV clinical trials can be obtained by calling: 1-800-TRIALS-A. A new on-line computer information service has also been instituted.

[55] DAVID E. ROGERS writes in an editorial that, "We should provide adequate funding for intense, targeted education that is imaginatively directed at high-risk groups, particularly teenagers." ROGERS, *Federal Spending On AIDS-How Much is Enough?* 320 N.E. J. MED. 1624 (1989):4; and in a related fashion, "We should provide federal funds for disaster relief to help the cities most seriously affected by AIDS" *Id. see* also *Confronting Aids* at 17, recommending federal grant programs for hard-hit communities. For one reason this is *not* done, *see* KOZOL *Rachel and Her Children* 101 (1988) (suggesting that lack of attention results from a perception of poverty as failure and the idea that one who fails should not be rewarded)

[56] *See* BOODMAN, *The Dilemma of AZT: Who Can Afford It?* "Wash. Post Health", Aug. 8, 1989, 6, col. 1 (As of 1988, 44 states paid for AZT through the Medical programs, and 2 other states paid for it only during hospital care. Variations among the states as well as in nations is indicative of unfairness). The cost of ATZ to federal and state governments un-

der Medicaid was 2 0 million in FY 1987 and is estimated to grow to 1 55 million in FY 1990 *Committee on Gov. Ops.* at 32 *See also* Orphan Drug Act, P.L. 97- 414, 96 Stat. 2049 (1983); Orphan Drug Amendments of 1985 Title 21, Sec. 360a et seq., P.L 99-91, 99 Stat. 387 (1985) (providing favorable pricing to company marketing AZT); *Orphan Drug Designation Given to Nine Medications*, AIDS POLICY AND LAW 5 (1987); Boffey, U.S. To Relax Rules on Experimental Drugs, N.Y TIMES, Mar 11, 1987, 24, col. 1.

[57] *See e.g.* CALIF HEALTH & SAFETY CODE, Chaps. 1.14 and 1 15 (1986) (provides funding for development, clinical testing, and guaranteed sale of a vaccine). The California statute does not limit liability for *known* defects; liability is limited if the vaccine is legally an "unavoidably dangerous drug" CHRISTAKIS & PANNER, *Appropriate Collaboration Between Industry and Government in the Development of an AIDS Vaccine*, 17 LAW, MEDICINE & HEALTH CARE, 130, 133 (1989).

[58] *See* WHO, United Nations Centre for Human Rights, International Consultation on AIDS and Human Rights, July 26-28, 1989, *Final Document. AIDS and Human Rights at 13*: "... the most successful projects are those in which the inherent dignity of the members of the target group has been recognized Projects were more likely to be effective where members of the population concerned were actively encouraged and empowered to design and implement their own educational projects."

[59] BOODMAN, *Up Against It*, WASH POST HEALTH, Sept 5, 1989, 12, col. 1

[60] BOODMAN, *The Dilemma of AZT: Who Can Afford It*? WASH. POST HEALTH, Aug. 8, 1989, 6, col. 1; SPECTER, *Early AIDS Treatment Urged*, WASH. POST, Aug. 4, 1989, A1, col 5; MASTERS. *AZT Found to Delay Onset of AIDS Treatment Urged for Up To 650,000* WASH POST, Aug. 18, 1989, A1, col. 3; BOLOGNESI, *Prospects for Prevention of and Early Intervention Against* HIV, 261 JAMA 3007, 3012 (1989) ("... as in most other biomedical problems, the earlier the intervention, the more favorable the outcome")

[61] *See* Federal Spending on *AIDS—How Much Is Enough*? 320 N. E J MED 1623 (1989) (In the seven years from 1982 through 1988, federal spending for AIDS was 5 4 billion; in 1989 more than 2.1 billion will be spent); WINKENWERDEN. KESSLER & STOLEC, *Federal Spending for Illness Caused by the Human Immunodeficiency Virus*, 320 N. E. J. MED. 1598 (1989) (recent reports by the Presidential Commission, the Institutes of Medicine, NIH, and the General Accounting Office request greater expenditures).

[62] ABBOT (Ed.), *Documents of Vatican II* 498 (1965)



The Armed Forces Response to the HIV Epidemic

Lt. Col. ROBERT R. REDFIELD, M.D.

One of my greatest concerns about the future of our society revolves around the choices we, as a *WORLD*, will make in response to the HIV epidemic. Will we choose to blame each other, fostering hatred and bigotry, or, will we come together in love and compassion, as one family in crisis? The role of the Church, I firmly believe, is to lead us down the right path.

Historically, the Catholic Church has provided central leadership in epidemics and human crises for centuries. Yet today, as a Catholic physician, it is my belief the Church's leadership and response to the HIV epidemic must be strengthened. I would like to see the Church make a stronger commitment to the global HIV epidemic. *Action,* not words, will be the key to motivating societies to bond as one. Medical and spiritual care for HIV-infected persons, their family and friends, and the society in which they live needs to be provided. The Church has the unique potential of providing this leadership by moving into the forefront, providing medical, social and spiritual care. If the Church will take such a leadership role, I predict others will then follow the example.

My purpose today is to share with you the Armed Forces experience with the HIV epidemic. Although the experience is that of the military, the perspectives are my own. As a military officer, I often ponder about the potential conflicts involving my position in the military, my profession as a physician, and my Catholic faith. But, in all my ponderings, I never thought I would use my experience in the Armed Forces as an example, and a petition, for the Catholic Church to use as a starting point. And yet, that is what I do today. I am proud of the response of the United States Military to the HIV epidemic. It has been consistent with the basic principles of medicine and public health. I am convinced other institutions, including the Church, could benefit from the experience of the Armed Forces.

From the beginning, the US Military recognized HIV infection as a medical/public health issue. Early diagnosis was embraced as the cornerstone of the Military's response. The benefits of early diagnosis to the HIV-infected individual are self-evident and provide opportunities to:

1) receive optimal medical care;



2) review personal priorities;

3) prevent opportunistic infections;

4) delay disease progression; and

5) prevent transmission to others.

The benefits of early diagnosis to an institution are also self-evident, providing the opportunity to:

1) optimize the medical care of its members;

2) optimize the practice of public health and prevention efforts;

3) facilitate an accurate definition of the extent of the problem so an appropriate response can occur;

4) aid in planning for the future so that crisis management can be avoided; and

5) allow accurate evaluation of the effectiveness of policies instituted so those policies can be appropriately modified.

Although early diagnosis is considered to be paramount to the practice of medicine, its role in HIV infection has been questioned. Recently, at a meeting between Russian and US medical societies, Russian physicians questioned whether it was ethical for a doctor to establish the diagnosis of cancer. Why? Because such a diagnosis resulted in burdensome news, and cancer was not curable. The American Medical Association's response reinforced the importance of early diagnosis, stating it was unethical for US physicians to deny patients a diagnosis because of concern over a burden, or the inability to cure the disease. The physicians' responsibility was to diagnose cancer early and treat their patients to the best of their ability-independently of the availability of a cure. Unfortunately, some in the medical community, and society at large (including the Church), have been slow to recognize the same importance of early diagnosis in regard

to HIV infection. The tide, however, is turning; now the call for early diagnosis is growing loud and clear.

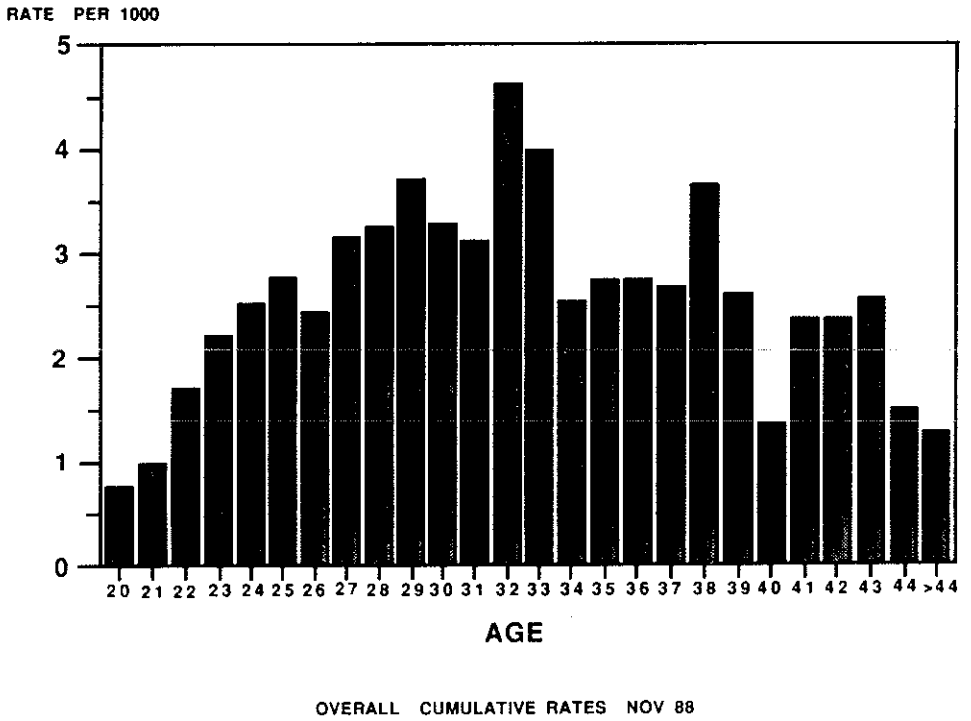
From the beginning the military purported early diagnosis of HIV infection to be paramount. Some, who recognize the military's approach as correct, hide behind the myth that " in the military it is easy to do the right thing. " This is not true. Although it may *potentially* be easier than in a major city (with its thousands of people lacking access to health care and its multiple institutions), the implementation of a correct medical response to HIV infection in the Armed Forces was not *easy*. Initially, there was a wide difference of opinion about issues related to HIV. Many failed to agree about the importance of early diagnosis; institutional denial was intrenched. Individual fears and professional frustrations were commonplace. Leadership, however, prevailed and consensus followed.

The Military has been successful



because hundreds of physicians were willing to diagnose HIV infection and provide the medical care needed. Thousands of nurses and paraprofessionals were willing to provide care. Hundreds of chaplains and their assistants were willing to provide comfort and spiritual care to patients with HIV infection, their friends, and family. Military hospitals were committed to provide quality holistic care for the HIV-infected person. The military medical leadership took on new priorities. Already stretched resources were stretched further, responding to the needs of soldiers with HIV infection and their families. And even more importantly, the Armed Forces, as a community, had to deal outwardly with the reality of the HIV epidemic. Commanders had to confront the reality of HIV infection in their units. Sergeants had to reinforce the spirit of non discrimination and compassion for fellow soldiers with HIV infection. Military leaders had to deal with many fears and concerns. Edu-

Fig. 1 - U.S. Army HIV mass screening positivity rates by age



cational programs had to be developed, modified, and tried again. Military leaders also had to deal with numerous personal decisions, ensuring medical and social support for the HIV-infected soldiers and their families. Military leadership had to develop and implement policies while maintaining its commitment to the HIV-infected soldier, the HIV-non-infected soldier, the Armed Forces, and the Nation served.

Essentially, then, the leadership had to respond and act on the best information of the time and begin to develop a plan and solution for the future, all the while remaining flexible and able to respond as new information about HIV and the epidemic was learned. The Armed Forces responded to HIV-infected soldiers as family members with a medical illness which required a concerned medical/social response. And, athough the response has not been perfect, the Armed Forces continues to try. I assure you that the execution of the Armed Forces response to the HIV epidemic was, and continues to be, in no way *easy. Yet, it was, and remains, the right thing to do.*



The military experience began in 1983. I was then a young medical virologist at Walter Reed Army Institute of Research. As a physician, my job was to be on the look-out for new viral diseases which may pose a future health threat to young men and women in the Armed Forces. It was only natural that my attention turned to investigate this new mysterious syndrome known as AIDS. In May 1983 I diagnosed the first case of AIDS in the military. Others followed. By early Winter 1984, I had diagnosed 21 cases of ARC and AIDS in the US military. The scientific mystery of this new syndrome was professionally consuming. I was fortunate to work with scientific leaders such as Drs. Robert Gallo and Anthony Fauci. While working with Dr. Gallo, I helped define the etiology of AIDS HIV infection, and working with members of

Fig. 2 - U.S. Army HIV mass screening positivity rates race/ethnic group by sex

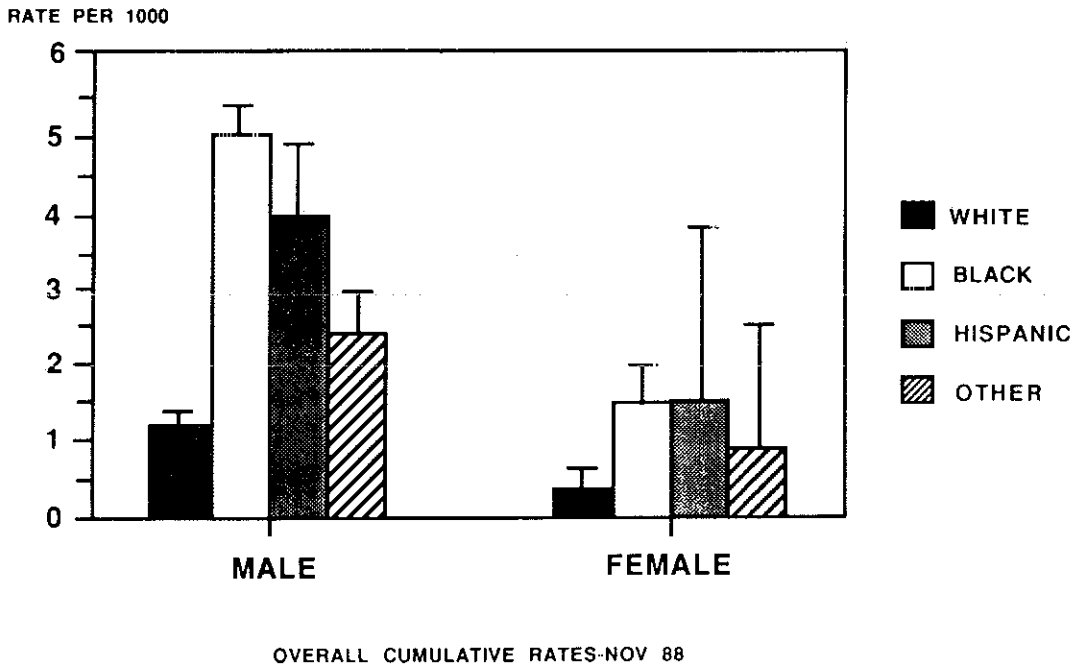
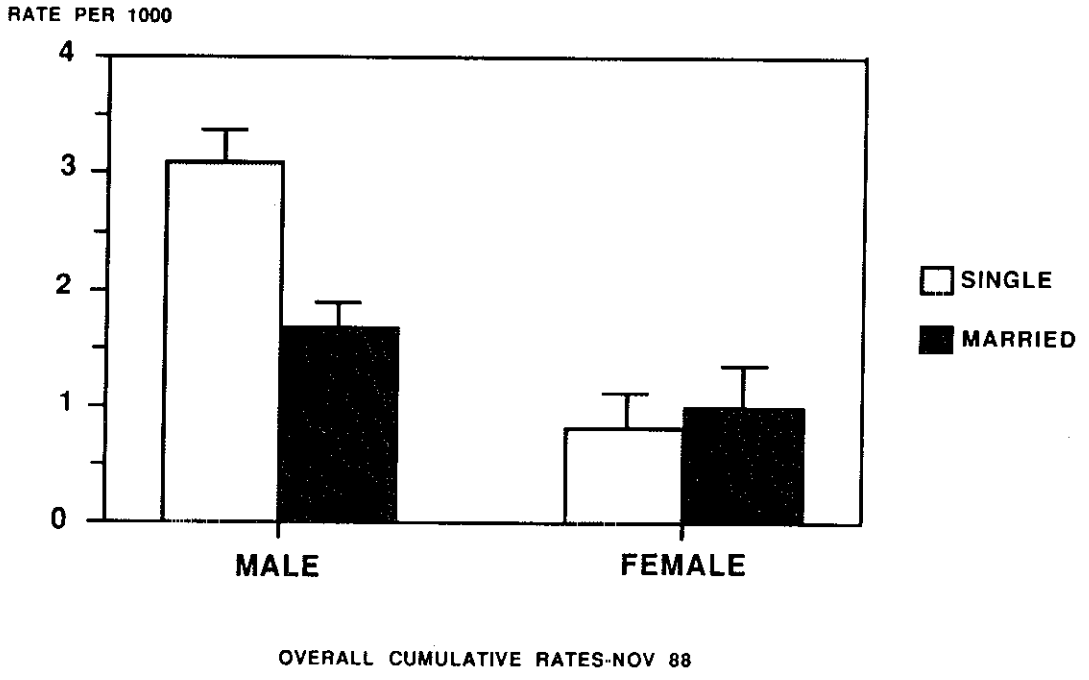


Fig. 3 - U.S. Army HIV mass screening positivity rates marital statys by sez



Dr. Fauci's group, I helped understand, the importance of the T helper cells integrity in the pathogenesis of clinical disease progression.

By Spring 1984, AIDS was no longer a scientific mystery. It was the endstage of a progressive infectious disease, caused by a retrovirus, HIV. One could now clinically diagnose HIV infection long before the symptoms, now universally recognized as AIDS, appeared. The spectrum of HIV infection was clearly defined; the clinical presentation was dependent on the functional integrity of the T helper cell system in the body. Subsequently, my colleagues and I developed a standardized clinical staging system for HIV infection. This provided uniformity in the clinical evaluation. It also provided the basis for standardized clinical care for HIV-positive patients within the military healthcare system.

Initially, the clinical experience at Walter Reed continued to be considered quite unique. For example nearly 50% of HIV infection was occurring in married couples. Females, heterosexual males, Black and Hispanic Americans were over represented, compared to national US statistics.



However, today it is clear the early experience with HIV infection reflected the healthcare population served within the military. Additionally, this standardized approach enabled the military to develop early insights into the natural history of clinical disease progression. By 1986, military cohort data demonstrated, in the absence of a scientific solution, HIV infection resulted in a predictable, progressive, ultimately fatal disease in more than 90% of those infected. By 1986, military epidemiological data supported the growing HIV epidemic in sexually active young adults applying for entry to the military services.

Military leadership discussed options about appropriate medical approaches to the HIV epidemic. Policies which promoted early diagnosis were developed. This was for the benefit of the individual as well as the institution.

HIV infection in the US Army

HIV infection in US Army by age

The overall prevalence of HIV infection is 1 per 500 for male soldiers

and 1 per 1000 for female soldiers. Age is the single most important variable related to HIV infection. The prevalence of HIV infection for individuals less than 20 years old was 0.6 per 1000, yet by age 30 the prevalence was greater than 1 in 300.

HIV infection in US Army by gender & ethnic group

Note that in the US Army, HIV infection is now more prevalent among Black American females (1.6 per 1000) than White males (1.2 per 1000).

HIV infection by marital status

Over 40% of the US Army personnel with HIV infection are married individuals. By 1986, HIV infection had become well established in the US Army military family.

Stage of HIV infection at the time of diagnosis

Note that more than 90% of the patients would be considered " asymptomatic. " Remember that despite the lack of symptoms, these patients are capable of transmitting HIV to others. If left undiagnosed, the spread of HIV through " ignorance " will continue unabated.

Natural history of HIV infection in US Army

These data reinforce the reality, in the absence of a scientific solution, that HIV infection will result in the premature death of a majority, if not all, of the individuals infected with HIV.

Incidence cases

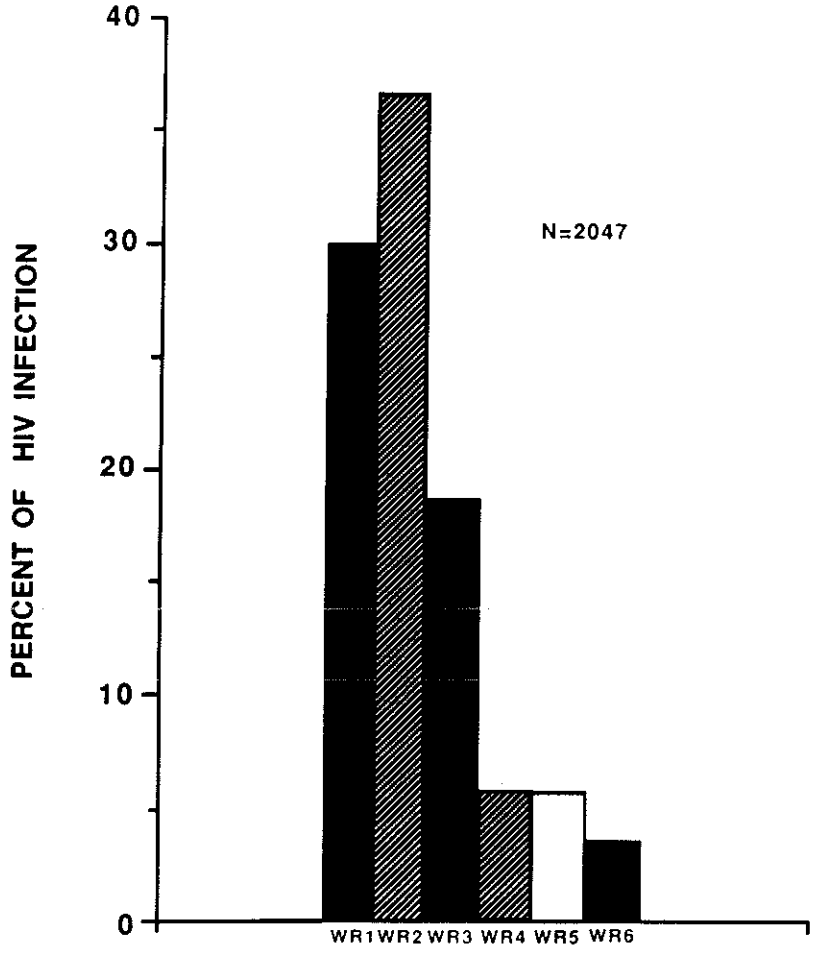
The current overall rate is approximately 600 soldiers per Year or 0.76 new infections per year per 1000 soldiers. This occurs despite the US Army policies of early diagnosis and test-linked education. Such is the occurrence of HIV infection, and though we are striving to defer mortality, it remains the single leading cause of peacetime mortality in the Armed Forces, surpassing automobile and all other types of accidents, suicides, and any other medical illness combined.



Projection of HIV infection

The US Public Health Service (USPHS) reported in 1986 that 1.5 million Americans have HIV infection. In 1989 the USPHS reported again that approximately 1.5 million Americans are HIV-positive. The fact is the USPHS does not know the extent of HIV infection in America. Military policies have left guesswork aside. With an accurate understanding of the prevalence and incidence of HIV infection in the US military, leadership can better plan for necessary resources to more effectively respond to HIV infection, and more accurately evaluate the effectiveness of instituted policies in controlling the epidemic.

Fig. 4 - Distribution of HIV-Infection by Walter Reed Stage



Progression of HIV infection by stage

The pending health care requirements in many institutions or cities is unknown. But this is not true in the US Army. Increases in the late stage patients will continue through the remainder of this century, despite military policies.

Situation of diagnosis in US Army

It should be emphasized that a majority of individuals with HIV infection are subclinical. Diagnosis strategies which focus on symptomatic disease would have denied more than 90% of the HIV infected individuals in the military the benefits of early diagnosis. Personally, I believe being denied this medical right is the ultimate in "*No care.*" The military approach is that early diagnosis of HIV infection is "*Good.*" Medical and institutional policies should facilitate early diagnosis Medical community and institutional policies should reinforce the courage of individuals to confront the reality of their health status. Unfortunately, in America, there has been a tendency in the civilian community for the medical community and institutions to reinforce individual fear of diagnosis for nonmedical reasons.



The Church should reinforce the importance of knowledge of infection. This is essential, if institutions are going to provide the care they say they *want* to provide. This is essential, if efforts at prevention are to be optimal and successful. HIV infection is a treatable and preventable infection. *But*, our ability to prevent and treat is dependent on knowledge of infection, at the personal level, at the institutional level, and as a society. In medicine, I always try to encourage my patients to face the reality of their health. I refuse to play any role in the reinforcement of their fears The Church should enforce the courage of its members for knowledge of HIV infection the benefit of themselves, their family and friends, and society, that waits to be *called to compassion*.

I hope that by now Church leaders will see though the smoke screens of "false-positive serology," "fear of discrimination," and "no reason to know" arguments. All this denial will guarantee is despair. Let the Church recommend that its members

Fig. 5 - Natural history of HIV infection U.S. army experience by initial Walter Reed Stage of infection

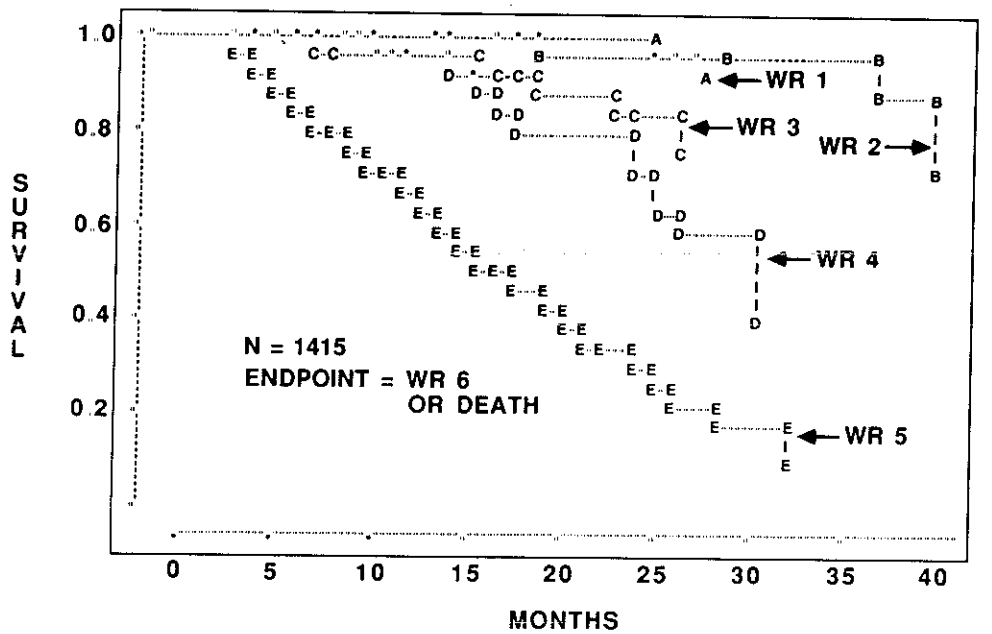
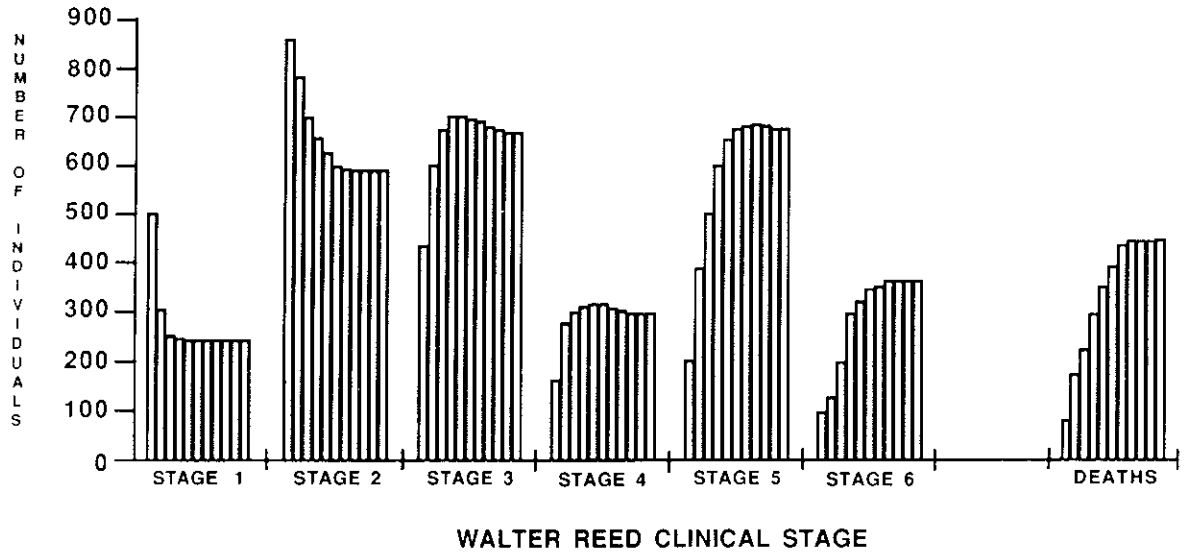


Fig. 6 - Estimated number of army patients by Walter Reed Stage, next 10 years

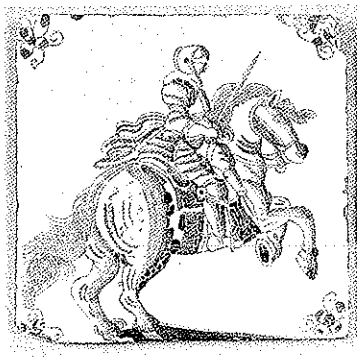


confront the reality of HIV infection in the flesh. *Know* if you are infected. *Seek* an early diagnosis among Church members. Why? Because medically it's the right thing to do. Why? Because the Church will not judge you, but care for you, in the context of your sacred personhood.

HIV infection in military civilian applicants

The civilian community in the US still has limited information about the HIV infection of today. Much of that information comes from the military's data. In order to enter the US military, applicants are required to undergo a medical examination to determine if they have underlying medical conditions which may preclude their completion of twenty-year military service. Many medical conditions are disqualifiers. Within the policy decision to treat HIV as a medical condition (without special exceptions), it was determined that HIV infection was such a condition. By law, it is not currently permitted for US military medical resources to be utilized to treat and care for applicants denied entry because of medical conditions.

It was disappointing to me that the civilian community decided not to respond aggressively and fill this void, facilitating the care and public health models which could have been developed for this population. Instead, many just cast blame and said the military should, therefore, not include HIV infection as a disqualifier.



Hopefully, now the Church will rise to help fill the void. In my view, the military acted responsibly in terms of the medical and public health issues of infected individuals, noninfected individuals, the society which the institution serves, and the world as a whole.

Prevalence of HIV infection by county

Individuals who enter the military must be high school graduates, without a history of felony, who outwardly deny homosexuality and drug abuse. Therefore, this is a select population, not necessarily representative of the US population as a whole. Overall, 1.5 per 1000 applicants are HIV infected (1.6 per 1000 males and 0.7 per 1000 females). Age, once again, is the most important single predictor of infection. Geographic location of applicants is second. (New York City prevalence rates are 8 per 1000 for men and women; at age 18 rates were 3 per 1000, and yet, by age 25, prevalence was greater than 2% for males and 1.8% for females).

Risk groups were originally perceived to be limited to homosexuals and intravenous drug users. Now innercity minorities are recognized as being " at risk. " In reality, the risk group includes any human being who is sexually active-no matter the age, sexual preference, or ethnic group. In other words, sexual exposure to an infected sexual partner is where the epidemic is moving. Recognition of the " final risk group " as sexually active adolescents and young adults is now required. We should not reinforce any false denial of this reality. It is inconsistent with the Church's primary responsibility of providing leadership for our society and thereby enabling the recognition that we truly are one family in crisis.

Teenager prevalence by county

At 17, the prevalence is approximately 1 per 10,000; by 18, 1/5000; by 19, 1/2000, and by age 20, 1/1000. The male to female ratio is 1 to 1. HIV infection occurs in young teenagers equally, men and women alike. Yet at age 17, girls are twice as likely to be infected as boys. Still, many try to deny that the HIV infection is moving into the youth of our countries and our Church.

Policy development

The evolution of Institutional or National HIV policy continues. First, the strategy was based on ignorance. Then, strategies based on general education, combined with condoms, free needles, and universal precautions were developed. All these interventions were designed to alleviate the necessity to diagnose HIV infection and confront the HIV epidemic in the flesh. These policies actually reinforce ignorance about HIV infection for the individual and institution. *Finally*, policy is moving us where we should be; strategy based on the appropriate medical agenda of early diagnosis and test-linked education to optimize the practice of medicine and public health.

Critical components of military program

Critical components of the military's policy response include:

1. Keeping the primary focus on HIV infection, rather than AIDS. HIV infection defines today's problem. AIDS represents a historical perspective of HIV infection occurring a decade ago. The chilling reality is that the AIDS epidemic of the remainder of the twentieth century has already occurred.

2. The recognition that HIV is a sexually transmitted progressively fatal infection, which although not yet curable, is *treatable and preventable*.

3. The recognition that early diagnosis is the cornerstone of both optimal medical and institutional policy.

4. The recognition that " the ideal " of early diagnosis is an obtainable goal *critical* to the implementation of optimal medical and public health HIV *policy*.

5. The development of quality clinical diagnostic procedures (serological antibody tests, T helper cell counts, delayed hypersensitivity skin testing).

6. The implementation of rational, nondiscriminatory policies consistent with the principles of medicine and the foundation of our values. HIV-infected soldiers are reassigned to the United States and retrained for nondeployable assignments. Individuals can continue on active duty as long as they are medically capable of performing their duties. When no longer able to perform their duty, individual HIV-positive soldiers are medically retired with full medical benefits.

7. A commitment by example to provide access to healthcare and support services required to all HIV-infected patients within the military healthcare system. Once diagnosed, patients are cared for to the best of the system's ability until death.

8. Development of test-linked education programs to minimize transmission to an uninfected partner. Informing sexual partners of infected status and use of condoms are required by law, if such an encounter is to take place. However, it is always against medical advice for such an encounter to occur. Unfortunately, what is legal and what is right are once again in conflict. But understand that what is medically and morally correct, remain in harmony.





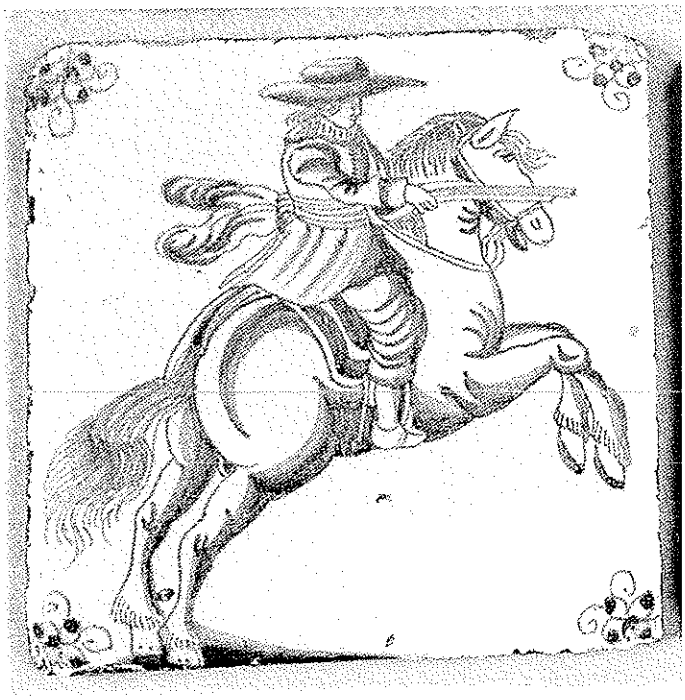
Conclusion

I believe the response of the US military will provide an excellent model from which to start. The military has tried to do the right thing, to embrace the principles of medicine, public health, and crisis prevention; independent of specific interest pressure; independent of human nature to foster institutional denial; independent of fear as to what may be found; independent of alibis about why nothing can be done. I am proud of the Armed Forces and the response of the military to the HIV epidemic.

Today I pray for the members of the Church, who have been denied the benefit of early diagnosis. Denying themselves the medical treatment required. The medical care that the Church's leadership would have provided. However, most importantly, I pray for them, because they have been denied the spiritual care and cure I know the Church and God will provide.

Thank you for the opportunity to share the military's experience and my perspectives with you. It is time to reject the temptation of denial of the HIV crisis, reject false prophets who preach the quick-fix strategies of condoms and free needles. The time has come for Church members and leadership alike to confront the HIV epidemic in the flesh. The HIV epidemic poses one of our greatest challenges and one of our greatest opportunities. The greatest challenge because of the magnitude of the crisis. And the greatest opportunity to reprioritize away from human material values to spiritual values as the foundation of our pragmatic societies. Our response will have a major impact on the world. The Church has the critical role in the global response to lead us down the right path. We need to use our knowledge, recognize our compassion, exploit our ingenuity, embrace our values, demonstrate our courage and lead without promises or guarantees. After all, that is what our *faith* demands. The HIV epidemic is the ultimate opportunity for all of us to do God's work - to teach *and* to heal. To care for those who need care in the context of the unconditional, nonjudgmental, human dignity they deserve. We must recognize that it is not our responsibility to develop a cure or vaccine for HIV infection, although I pray we will someday. Our responsibility is rather to go forth with courage and wisdom, using the tools available today to the best of our God given ability, and make an impact on the HIV epidemic of the next century, and its ultimate effect on our world.

Lt. Col. ROBERT R. REDFIELD, M.D.
Chief, Dept. of Retrovirus Research
Walter Reed Army Institute of Research USA



risonanza nel mondo

L'OSSERVATORE ROMANO

mercoledì 15 novembre 1989

LA SECONDA GIORNATA DEL CONVEGNO INTERNAZIONALE SULL'AIDS

Promozione dei valori etici a difesa della dignità dell'uomo

IL MATTINO

Domani convegno internazionale con 1500 esperti di tutte le fedi

Il teologo Honings: «Eliminare le cause, non pensare alle precauzioni»
L'arcivescovo Angelini: «Occorre educare alla salute e alla sessualità»

Aids, consulto in Vaticano

«Solidarietà umana e cristiana agli ammalati»

IL SECOLO XIX

Un convegno con il Papa

Vaticano: «L'Aids non si combatte con i profilattici»

CITTA' DEL VATICANO — «Un atto ipocrita, sleale e disdicevole». Così è stato definito da mons. Fiorenzo Angelini, presidente del Pontificio consiglio per la pastorale degli operatori sanitari, l'uso del

LE RENOUVEAU DU BURUNDI

Mercredi 15 Novembre 1989

Santé

Le sommet mondial sur le SIDA au Vatican: les contraceptifs sur la sellette

Il Messaggero di Roma

La Chiesa: il profilattico non riduce il rischio

Contro l'emergenza Aids il Vaticano convoca esperti da tutto il mondo

42 / EL PAÍS, miércoles 15 de noviembre de 1989

El obispo Angelini abrazó al sacerdote rebelde

El cardenal O'Connor afirma que los enfermos que mueren del SIDA "se van al cielo"

JUAN ARIAS, Roma

El cardenal O'Connor, arzobispo de Nueva York, afirmó ayer en la conferencia mundial sobre el SIDA organizada por el Vaticano que estos enfermos, a quienes la congregación de la madre Teresa de Calcuta ayuda a morir serenamente, "ciertamente se van al cielo". El poderoso cardenal de Nueva York ha confesado que él ha asistido personalmente a más de 1.000 enfermos del síndrome y que incluso ha recogido con sus manos sus orinales.

I.S.I.S. S.p.A.
Istituto Internazionale per gli Studi e l'Informazione Sanitaria

"Vivere perchè?"
13-15/11/1989, Città del Vaticano

Centro collaboratore OMS per l'Informazione e la Documentazione Sanitaria

CORRIERE DELLA SERA

Un vertice mondiale con scienziati, vescovi e teologi da domani esaminerà l'evoluzione della terribile infezione

Allarme anti Aids dal Vaticano

La Chiesa: consigliare il profilattico è sleale e ipocrita

Il virus colpisce sempre di più le donne e si trasmette ai neonati - Il responsabile della Sanità si scaglia contro l'anticoncezionale: «Sviluppa il contagio più di quanto non immaginiamo»

November 12, 1989 OurSundayVisitor 17

Archbishop: AIDS not divine judgment, punishment

Scientists, philosophers, theologians and canonists to attend Vatican conference on AIDS

ABC

pág. 52 JUEVES 16-11-89

El Papa pide un frente mundial de lucha contra el Sida y la toxicomanía

La crisis de valores, causa de la epidemia más grave del siglo XX

Ciudad del Vaticano. **Miguel Castellví**

Un mensaje de solidaridad a los enfermos de Sida –«la Iglesia está con vosotros», dijo el Pontífice– y un llamamiento a los Gobiernos para que pongan en práctica un plan global de lucha contra el Sida y la drogadicción fueron los principales contenidos del discurso que Juan Pablo II dirigió ayer a los participantes en la Conferencia Internacional sobre esta epidemia que, con gran éxito, se acaba de celebrar en el Vaticano.

PALABRA 296, I-1990 (41)

ENTREVISTA

CONFERENCIA INTERNACIONAL SOBRE EL S.I.D.A

Por Enrique CARLIER

LA IGLESIA PROPONE UNA PREVENCIÓN DIGNA Y UNA ASISTENCIA SOLIDARIA DEL S.I.D.A.

Entrevista para PALABRA con Mons. Fiorenzo Angelini y el P. José L. Redrado

la Repubblica

Giovanni Paolo II in Vaticano ha concluso il convegno internazionale

"La Chiesa vi aiuterà"

Il messaggio del papa ai malati di Aids Andreotti: 'In Italia s'ignorano i dati veri'

Il pontefice si è rivolto ai sacerdoti e alle suore, ma anche alle famiglie e ai medici Angelini: "Presto un convegno di malati, tra loro e per loro"

Herald Tribune

Cardinal and Scientist Clash on AIDS

VATICAN CITY (Reuters) — An American cardinal and an American scientist clashed at a Vatican-sponsored conference on AIDS that opened Monday.

Cardinal John O'Connor of New York said the spread of the disease should be stemmed by people abandoning dangerous sexual practices and injection of drugs. The scientist, Robert Gallo, one of the discoverers of the AIDS virus, expressed optimism that a vaccine for the disease would eventually be found.

The cardinal said, "The truth is not in condoms or clean needles. These are lies, lies perpetrated often for political reasons." Mr. Gallo said that he found parts of the cardinal's speech "upsetting" because he spoke as someone with a strong belief in life after death. "In this world that we live in," he said, "not everybody believes in an afterlife."

THE WASHINGTON POST

Pope Condemns Bias Against Victims of AIDS

Emotional Vatican Conference Struggles With Moral Conflict

LA STAMPA

Lo dice il Vaticano, da domani un convegno

«Aids, il profilattico aiuta il contagio»

CITTA' DEL VATICANO. La Chiesa si occupa di Aids con un degradarli, non riconoscere le forze interiori presenti in ogni

IL POPOLO

Angelini abbraccia un prete aidetico

La Chiesa è con i malati di Aids

ROMA – Un caldo applauso dell'assemblea di scienziati, clinici e teologi di vari paesi riuniti in Vaticano per il convegno sull'Aids ha accolto un abbraccio che il presidente del simposio, arcivescovo Fiorenzo Angelini, ha dato al sacerdote

te una sua missione in Africa. Si tratta, infatti, di un missionario irlandese, che è stato riammesso pienamente al simposio internazionale.

Mons. Angelini, che oltre a presiedere il convegno è capo del dicastero Pontifi

Fidia Information Network — Headlines

THE NEW YORK TIMES INTERNATIONAL *THURSDAY, NOVEMBER 16, 1989*

Pope Asks Global AIDS Effort

ROME, Nov. 15 (Reuters) — Pope John Paul II, ending a stormy Vatican conference on AIDS, called today for a global strategy to fight the disease.

The Pope, in his first speech dedicated exclusively to AIDS, also indi-

In a clear reference to homosexual activity, the Pope spoke of "abuse of sexuality" as being one of the causes of AIDS.

Earlier the conference witnessed

Avvenire

Conferenza in Vaticano

Abbraccio al sacerdote rientrato dall'Africa contagiato dall'Aids

Un commovente abbraccio ha scosso ieri l assemblea di oltre mille convegnisti, riuniti in Vaticano in un vertice sull'Aids: monsignor Angelini, presidente del Consiglio per la pastorale sanitaria, ha accolto così John White, il sacerdote irlandese sieropositivo

PAESE SERA

Convegno in Vaticano sul dramma del secolo

AIDS: ALLARME E POLEMICA

E la scienza dà speranza

Avanti!

Convegno in Vaticano con Gallo e Montagnier

AIDS, 600 MILA CASI NEL MONDO

il manifesto

CROCIATE

Maledetto profilattico

«E' immorale e insicuro»: il Vaticano ribadisce il suo «no». Convegno sull'Aids

LA NAZIONE

LA CHIESA E L'AIDS

L'abbraccio a un malato

John White, prete irlandese, non sa dove ha contratto la malattia

Vaccino: contro attese snervanti

Quali i doveri morali del medico

IL MATTINO

Congresso mondiale in Vaticano con vescovi e scienziati. Il teologo: un segno dei tempi Richiami alla fedeltà coniugale e alla castità prematrimoniale. I malati non vanno emarginat

Aids, non basta la scienza

La Chiesa: occorre cambiare stile di vita

IL TEMPO

Dal simposio vaticano impressionanti dati sulla diffusione e la trasmissione del flagello

Aids, l'umanità può salvarsi solo con strategie globali

il Giornale

Dal cardinale di New York e da un teologo quasi una conferma del «castigo di Dio»

Aids, messo all'indice in Vaticano il «profondo disordine sessuale»

«Il rimedio non è nei profilattici» - «Oltre alla risposta biomedica, occorre sconfiggere l'ideologia permissiva»