INSTITUTE FOR THEOLOGICAL ENCOUNTER WITH SCIENCE AND TECHNOLOGY

(ITEST)

NEWSLETTER

Volume II, Number 4

October, 1980

For Your Calendar:

The March 13-15, 1981 Workshop will be devoted to the industrial use of recombinant DNA, especially in view of the Supreme Court's allowance of patenting of recombined bacteria. We shall bring together: a scientist to explain recombinant DNA techniques, a lawyer involved in the recent patent suit before the U.S. Supreme Court, a media consultant to discuss the popularization of such issues, and a political scientist-ethician to speak to the implications of patenting.

The October 9-11, 1981 Conference will discuss the topic of "Warfare in the 1990's." We hope to assemble a panel of speakers to consider the following questions: the role of science in military planning; the technological state of warfare; the theological question "whether, in the age of atomic, biological, chemical, and 'light' warfare, a nation may legitimately defend itself" and "if so, how?"

ITEST Notes:

We are beginning our 1981 membership drive. Our 1980 membership was 463. We hope to improve that significantly this coming year. The strength of ITEST resides solely in its members, in each of you. The members are, and must be, apostles to the churches and to the scientific community and to their disciplines and professions. We ask you to spread the news of ITEST and its work to those of your colleagues and friends who are engaged in either or both of the poles represented in this group. Too many of us find ourselves isolated in our deep concerns about the scientific enterprise or the life of the church. We need communal support and communal opportunity for sharing concerns and approaches to solution. The community that is ITEST needs what its members can provide and in return we would like to provide a center (a home, really) in which concerned and dedicated people can gather.

Bibliographical Notes:

In the April, 1980 issue, and continued in the July issue, we initiated the practice of publishing selected notes on publications by ITEST members. We continue that listing here. We regret that for reasons of space we can publish only partial bibliographies. The publications of Dr. Jerzy A. Wojchichowski (Faculty of Philosophy, University of Ottawa, Canada) number 53.

Volume:

"Survey of the Status of Philosophy in Canada", Ottawa, 1970, pp. 150.

Editor:

Conceptual Basis of the Classification of Knowledge, Verlag Dokumentation, Pullach/Munchen, 1974, pp. 503.

-1-

Contributor:

"The Ecology of Knowledge," Science and Society, Past, Present, and Future, N.H. Steneck, editor, The University of Michigan Press, Ann Arbor, 1975, pp. 258–302.

"The Problem of Knowledge and the Role of Research," <u>Inter-University Cooperation in Research</u>, edited by G.F. McLean, Concorde Publishing, Inc. Lancaster, Pa., 1975, pp. 24-31.

Articles:

"La Crise de la Culture ou la Crise de la Rationalite?" <u>Bulletin de l'Académie royale de Belgique</u> (Classe des Sciences) 5^e serie – Tome LXIV, 1978, 7–8, pp. 478–488.

"Knowledge as a Source of Problems," Shaping the Future, Walter Baker, ed., Ottawa, Centre for Policy and Management Studies, 1979, pp. 609-626. Reprinted in Man-Environment Systems, Vol. 8, No. 6, November, 1978, pp. 317-324.

"The Difference of Man - and the Difference It Makes - A Response," Ibid., pp. 565-568.

"La Crise de la Culture Est-Elle Une Crise de la Rationalite?", <u>La Nuova Critica</u>, Rome, No. 46, 1978, pp. 31-43.

"The Problem of Knowledge: Notes for Discussion for the Ecology of Knowledge Network," Futures Canada, Vol. 3, No. 4, 1979, pp. 8-9.

"Man and Knowledge: One or Two Systems?" Systems Science and Science, Proceedings of the 24th Annual Meeting of the Society for General Systems Research, Bela Banathy, ed., Louisville, Ky., 1980, pp. 427–438.

Science and Technology in the Religious Studies Classroom

Vance L. Eckstrom
Department of Religious Studies
The University of Santa Clara

After an especially sobering discussion one day, a student suggested that I give my course a new name. I should call it, he said,

What's Wrong With the World, and How Us Guys Can Fix It If We Just Get Our Heads Together.

That wording lacks refinement, and the school computer would never swallow such a fulsome title, but it is nevertheless a fair description of that academic offering more prosaically known as "Religious Studies 190: Religion, Science, and Technology." Ten years ago, when I first taught this course under the title "Religion and Science," my vision of what it should include was comparatively narrow. Today I understand

its scope more broadly, as including four main aspects: the purely theoretical, the technological, the political, and the personal. What follows is an explanation of what I mean by those terms, and a recommendation for a very broad vision on the part of all who are concerned about the impact of science and technology on us and our world.

In what follows I concern myself only with the relationship of Christianity to science and technology. Since other faiths and religious philosophies have different approaches, I cannot consider their special contributions within limitations of this essay.

1

One aspect of the religion-science relationship, as I treat it in my course, is the <u>purely theoretical</u>, which relates theology, the rational examination and explication of faith and doctrine, with pure science, the academic understanding of natural reality and its phenomena. This theoretical level has two main parts. The first is an historical study of the movement from the medieval world view to this era's radically secular understanding of nature, and of "the warfare of science with theology" (as Andrew D. White's famous book title had it) which marked so much of this four-century-long transition. This segment focuses especially on Galileo and Darwin. The second part includes the areas of lively contemporary discussion: the implications of the Heisenberg Indeterminacy Principle, behavioristic versus humanistic psychology, theories about the origin of the universe, the rising influence of "scientific creationism" against biological evolution, and so on.

The outstanding book in this area is lan G. Barbour's Issues in Science and Religion. 1 Written fourteen years ago, certain parts of the book are somewhat dated, and I would welcome a revised edition. But even after this decade and a half of rapid development in science, the only defect in the book which I supplement with additional reading is its inadequate treatment of the anti-evolution movement among conservative Protestants. Barbour's interpretation, that this movement is essentially unchanged since the last century, is understandable for 1966, but that judgment will hardly do for 1980. Today many individual scientists, and such organizations as the Institute for Creation Research in San Diego, search out and argue the evidence against evolution from one species to another with a carefully scientific approach the results of which deserve a fair hearing. To expose my students to this point of view, I have them read "Creation, Evolution, and Public Education," by Duane T. Gish. 2 In spite of this silence concerning scientific creationism, Barbour's magisterial volume is the first reading for my course, and background for all that follows.

11

At first I used Barbour's book as my only text, and limited the course to a theoretical leve. However, student comment soon made it clear that the syllabus should also include a technological aspect, dealing with the control of nature and the ethical problems which that control raises. We moderns usually assume that applied science is a straight-forward benefit to humanity. I subject that assumption to examination by having my students read Jacque Ellul, with his notorious diatribes against technology, and other authors who stress that, granting all its potential for good, technology is all too often used for evil. We also study the Marxist claim that, in the absence of a socialist system, technology as means of production inevitably falls into the hands of a relatively few greedy men who exploit their workers, manipulate consumers, and periodically instigate war to maximize their profits.

Shocked by these trenchant challenges against our prevailing trust in technology, my predominantly upper-middle class students become more alert to present or potential dangers and absues in the many other technology-related issues we discuss: gene-splicing experiments, pollution, the use of resources, experimentation on human subjects, the food and population problem, the dehumanizing effects of many jobs, the impact of imported technology on third world countries, the pressures on scientists and engineers to use their abilities in questionable projects, the distribution and use of research money, the arms race, and so on.

This applied level of inquiry raises questions about how to decide what is good or bad. I begin with the use of "pure type" hypothetical examples. While manipulating genes to prevent the agony of Tay-Sachs disease is good, such manipulation to produce a freak human being as an experiment is clearly bad. I go on to use many real-life examples from current news reports, and these are seldom so clear cut. From these more difficult concrete cases, certain questions emerge as basic: Who should decide these complex issues? Should they be left to experts, or are they social policy matters, where the general public has a right to a voice? Can the public acquire sufficient understanding, so that it can make something better than merely arbitrary or emotion-based decisions? And, most basic of all, on what grounds does one say yes or no to a proposed course of action? What are the applicable ethical principles?

Obviously I cannot incorporate a full-scale ethics curriculum into my course, but I lay out some basic guidelines which I believe can command wide even if not universal assent. Every serious ethic, whatever its basic principle or primary emphasis, in its analysis of acts eventually considers all or most of these four factors: the intentions of the actor; the character of the means employed; the consequences of the act; and the applicable moral laws, whether found in the will of God, the fabric of reality, or whatever. I suggest to the students that any act, to be judged ethically good, must not be wrong by the standards of any of the relevant categories. John Rawls, in A Theory of Justice, and Thomas Garrett, in Business Ethics, use comparable approaches, attempting to synthesize most of the strengths of previous ethical systems while avoiding their weaknesses. Though neither professes to present an explicitly Christian ethic, they are not inimical to Christian concerns. Rawls, for example, builds into his theory a special regard for the disadvantaged which is harmonious with the New Testament concern for the poor, the widowed, the orphaned, those whom Jesus called "the least of these my brethren."

Four books provide the majority of readings in this segment and on to the end of the course. They are:

Willis H. Truitt and T.W. Graham Solomons, editors, Science, Technology, and Freedom (Boston: Houghton Mifflin, 1974).

lan G. Barbour, editor, Finite Resources and the Human Future (Minneapolis: Augsburg, 1976).

Robin Clarke, editor, Notes for the Future: An Alternative History of the Past Decade (New York: Universe, 1976).

Paul Abrecht, editor, <u>Faith Science and the Future</u> (Philadelphia: Fortress, 1979).

Each of these books is a collection of readings; in combination they provide a variety of subject matters and points of view. I survey my students each quarter about their special concerns, and make some adjustments in the assignments to meet their specific interests.

III

Studying the immense impact of science and technology on today's world and the enormous ethical issues involved introduces the third phase of the course, a consideration of social policy and practical politics. This unit struggles with questions of positive action on the local, national, and international level to meet basic human needs, achieve minimum standards of justice, prevent a nuclear holocaust, avert the poisoning of our environment, and so on. This third phase of the course relates ethical concerns to larger social entities such as nations and economic classes.

This part of the syllabus exposes the students to many new issues: the debate over economic systems; the relation between rich and poor nations; government's right to its own independent course of action in an increasingly interdependent world; the morality of violent overthrow of unjust and repressive regimes; care for the earth and use of its resources; the right balance between providing jobs and protecting the environment; and so on. We take note of various utopian proposals, reminding ourselves that only those measures which influence actual practice will help the nations of the world and their people. Pessimists in the class assert that there is little improvement over the long run. Optimists, however, affirm that we do have a chance to make things better, and that we surely ought to work at it. We are driven back ultimately to these basic questions: Can we avert the various disasters that threaten our world? Being both hopeful and also realistic, how good a world do we dare aspire to? And what are the optimum means we can utilize in working toward the best world of which we are capable?

I remind students that the achievement of a just and sustainable world of the future will almost certainly require a fairly major redistribution of wealth and power among the nations and economic classes of the world. The oil-producing countries have succeeded in forcing a partial redistribution, and we have resented it immensely. After experiencing the impact of sky-rocketing oil prices, would the citizens of a power like the United States ever voluntarily accept a further reduction in standard of living to help the poor countries of the world?

These social and political issues may at first appear quite unrelated to science and technology. However, the latter produce a great deal of their present effect, and will have even greater future impact, within the realm of government policy (concerning, for example, the production of energy) and international relations (the arms race, the production and distribution of food and so on). Thus any attempt to deal with science and technology in isolation from the political context would be unrealistic and dishonest.

IV

In pondering the staggering problems we discuss in this course, a majority of the class members manifest some sense of responsibility to make a <u>personal contribution toward solutions</u> for the threats we face. They then must confront the question of how the concerned and responsible person can proceed, knowing that most efforts to create a significantly better world either make disturbingly small progress or fail altogether.

Many of my students' contributions to a better world will no doubt be made on an individual level: the engineer who designs for durability rather than early failure, the householder who recycles aluminum and glass, the manufacturer who disposes of toxic waste safely, the psychologist who unfailingly respects the integrity of his subjects. But many of the world's scientific and technological problems require cooperative group effort. I stress to the students their responsibility as future leaders, especially (a bit of tongue in cheek here) — now that they have been privileged to take this class and achieve illumination. I commend to them specific ways of helping. They can become active in the political process as enlightened voters, campaign workers, and candidates for public office. They can participate in various voluntary organizations. They can encourage their churches to accept responsibility for social concerns. We discuss the referendum process, by which such technology—related issues as the construction of nuclear generating plants are frequently decided. We note the skillful use of the courts in recent years to achieve environmental goals not otherwise attainable. Permeating all this is the theme that the situation is not good but not hopeless. Business as usual can lead to disaster; intelligent and concerted effort can bring a significantly improved world.

Despite the enormity of the problems the class brings to light, most of my students at first assume that they can make their contributions toward solutions without modifying their career plans or sacrificing the lifestyle to which they aspire. They tend to be quite uncomfortable about any challenges to their basic values, or to their presuppositions about the world and its workings. They resent talk of redistributing wealth and power. But as they comprehend more the breadth and depth of what we are up against, some of them achieve a heightened vision of themselves and their role in the world. As one student expressed it, "My career as an engineer will be different because of this course."

When such a growing vision does emerge, however, it needs deep roots to survive and flower. The person who is serious about making things better must have the inner resources to deal with failure and disappointment. Yet these frustrations are not unlike other trials in life: ruptured friendships, economic loss, personal illness or injury, the death of loved ones, and the like. All people, especially educated and aware people, should strive to develop a sense of personal integrity, worth, and purpose which can carry them through hard times. The Christian recognizes God as the essential source of his strength for surviving and continuing to work toward a better world. As opportunity arises, I encourage my students toward a relationship with God which balances meditation and worship with service and community involvement — service to others through daily work, and involvement in social problems and political affairs. My lectures at this point in the course reflect Walter Rauschenbusch's social gospel, Latin American liberation theology, and my own convictions about the immense importance of the Christian layman's day by day ministry in the world.

A truly effective vision for a better tomorrow demands a holistic view of the world: the connectedness of the spiritual and the material; the interdependence of nations; the inter-relatedness of economic, political, and environmental problems; the oneness of peoples. I commend to my students certain thinkers who may be helpful to them because they have attempted a comprehensive understanding of the world, including such diverse minds as Pierre Teilhard de Chardin, Loren Eiseley, William Pollard, E.F. Schumacher, Buckminster Fuller, Fritjof Capra, and Itzhak Bentov. My colleague Dr. Brian Hall discusses his theory of the levels of consciousness with my class. According to his interpretation, at the lowest level of consciousness people see the world as an alien and hostile place where their chief business is the struggle for survival and individual advantage. When they rise to the higher levels of

consciousness, they perceive the world as a project and as a mystery, to be improved and cared for by cooperating men and women. This systems theory approach to personal fulfillment and responsible action also takes into serious account the need for various skills to understand and act effectively in a complex situation without burnout or collapse. Hall deals mostly with the business and organizational realm, but his concept is broad enough for application to national and international affairs. It is in fact one of his main points that the higher levels of consciousness do include the global level of understanding which is essential for the resolution of world problems.⁷

In this aspect of the course, then, I highlight for my students that combination of spiritual resources and practical skills they will need to function well as agents of change in a recalcitrant world. I emphasize for them the part that science and technology can play in making the world better, but I stress even more the decisive role of the people who manage these vast powers and distribute their benefits. A more just, more sustainable world may be more Spartan than present plush American suburbia, but it need not be nuclear ashes. We may be the ones who make the difference, if we work at it faithfully, intelligently, cooperatively. Yet, realistic about the potential for failure, I also commend to my students that kind of spirituality expressed recently by Mother Teresa of Calcutta, when she said, echoing others of like commitment before her, "God has not called me to be successful. He has called me to be faithful."

٧

These then, are the four main aspects which my course has grown to include, and which I believe are essential to a responsible Christian view of our technology-laden world and its problems:

- (1) the relationship between Christian teaching and scientific knowledge;
- (2) the impact of technology and the ethical issues it raises;
- (3) the social policy questions and the national and international political issues where technology has so much of its current impact; and
- (4) the personal qualities which afford an individual maximum effect on the problems which threaten us.

Is the course too idealistic? Does it try to do too much? It does indeed have high aspirations. But most students need, and many are actively seeking, a vision of the whole expansive enough to encompass, in one grand sweep, their book learning, the glory and ugliness of the real world, and the will of God for them and the cosmos. A course with the evocative title "Religion, Science, and Technology" has a special responsibility to offer them a holistic view which incorporates informed concern, effective methodology, and well-grounded hope.

FOOTNOTES

1. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

- 2. Available from The Institute for Creation Research, 2716 Madison Avenue, San Diego, California 92116
- 3. Cf. James M. Gustafson, "Context Versus Principles: A Misplaced Debate in Christian Ethics,"

 Harvard Theological Review, Vol. 58, No. 2 (April, 1965); reprinted in Martin E. Marty and Dean

 G. Peerman, editors, New Theology No. 3 (New York: Macmillan, 1966), pp. 69–102.

 Gustafson has continued his exposition of this point in Protestant and Roman Catholic Ethics:

 Prospects for Rapprochement (Chicago: University of Chicago Press, 1978), and more recently in

 "A Theocentric Interpretation of Life," Christian Century, Vol. XCVII, No. 25 (July 30-August 6, 1980), pp. 754–60.
- 4. Cambridge, Mass.: Belnap Press of Harvard University Press, 1971.
- 5. Englewood Cliffs, N.J.: Prentice-Hall, 1966.
- 6. Part I of Faith Science and the Future, mentioned in the next paragraph, also has a certain amount of this broad basic ethical theory.
- 7. The most recent in Hall's series of books on these themes is: Brian P. Hall and Helen Thompson, Leadership Through Values: A Study in Personal and Organizational Development (New York: Paulist, 1980).
- 8. Quoted in Time, Vol. 116, No. 2 (July 14, 1980), p. 67.

A REAL THREAT

Lawrence Barry, S.J. Editor, ITEST Newsletter

At times the intense interest in the preservation of our environment seems to show an unfortunate tendency to concentrate on small and popular, rather than real, threats. One important threat that seems to be steadfastly ignored is that arising from the effects of an increase in carbon dioxide in our atmosphere.

Our climate is made suitable for human life by an incredibly complex, almost miraculous, balance of many factors. One of these is the "greenhouse" effect. Energy from the sun comes through the atmosphere and warms the surface of the earth. Some of this energy is radiated back into space. The sun's rays are high energy (i.e., shorter wave length) and most of them penetrate our atmosphere and warms the surface of the earth. The earth's radiation into space is in the form of lower energy and longer wave lengths which are not as penetrating. Much of this energy is reflected by the atmosphere back onto the earth. Carbon dioxide is an important element for this greenhouse effect: the more carbon dioxide in the atmosphere, the more heat is trapped. Our sister planet, Venus, has a surface temperature hot enough to melt lead. Its atmosphere is very rich in carbon dioxide. Thus its greenhouse

effect is greater than that of the earth. A set of balances is involved. Plants take in carbon dioxide from the atmosphere and produce oxygen. Animals take in oxygen and exhale carbon dioxide. All forms of combustion produce both carbon monoxide and carbon dioxide. The right amount of carbon dioxide in the air keeps the planet at a temperature range within which life is possible. The quantities involved in this balance are so great that for a long time nothing we humans did could have any significant effect on it. This situation may have changed. Many experts are now wondering how long we can continue to burn fossil fuels in ever increasing quantities before we do upset this balance and bring on a change in the earth's climate.

This is a quite controversial issue. Those who claim that we are upsetting this balance have received some confirmation from a special group convened by the National Academy of Sciences. The group was requested in May be Frank Press and was chaired by Jule G. Charney of MIT. It was made up predominantly of experts who had not been involved in previous studies. The November 23, 1979 issue of Science gives a report on their findings. They stated that the basic model relating carbon dioxide to global warming is, so far as they can see, correct. The concentration of carbon dioxide in the atmosphere was about 314 ppm (parts per million) in 1958 and was 334 ppm in 1979. If our use of fossil fuels continues to rise at its present rate of 4 percent, we will double the amount of carbon dioxide by the year 2030.

The National Academy of Sciences emphasized a factor that may delay warning signs until the situation is past remedy. It is the tendency of the oceans to act like a giant flywheel. It requires a large amount of heat to alter the thermal condition of the oceans, but once their thermal condition has been altered the oceans would help maintain the higher temperature. The inability of scientists to produce exact and certain dates and figures for the effect seems to lure people into complacency about what could be an environmental disaster for our planet equalled only by a full scale nuclear war.

The group's report to the President's science advisor stated:

Of course we can never be sure that some badly estimated or totally overlooked effect may not vitiate our conclusions. We can only say that we have not been able to find such effects. If the CO₂ concentration of the atmosphere is indeed doubled and remains so long enough for the atmosphere and the intermediate layers of the ocean to attain approximate thermal equilibrium, our best estimate is that changes in global average temperature of the order of 3⁰C will occur and that these will be accompanied by significant changes in regional climatic patterns.

In <u>Insight</u>, Bernard Lonergan discusses the biases of common sense. Two important ones are dramatic bias and general bias. Dramatic bias is a tendency to judge issues by their ability to make a present dramatic impact. General bias is a tendency to ignore long term effects in favor of what is immediately 'practical'. Saving cute little animals can be dramatic and make a fine issue for 'practical' politics. What we are doing to our atmosphere can seem like the plaything of abstract speculative science. When it becomes dramatic and immediately practical, it will be too late.

In conclusion let me quote from another article from the same issue of <u>Science</u>. This one deals with ozone:

The atmosphere has taken another bad beating from a new Academy report on the ozone problem. A study released on 8 November concludes that the ozone in the stratosphere is being depleted at twice the rate estimated in a 1976 survey. Continued worldwide use of fluorocarbons will produce a 16.5 percent reduction of the ozone layer, half of which will occur in the next 30 years. The earlier report estimated the eventual ozone reduction at 7.5 percent. Better data and improved computer models are the reason for the change of prediction.

Some Excerpts from a Letter

(These excerpts are from a letter we recently received from Harold Naylor, a Jesuit priest teaching English, biology, and ethics at Wah Yan College, Kowloon, Hongkong. Father Naylor wrote some articles for the Newsletter a few years ago, one of which was on the building of the Hongkong subway system.)

"After an Ecumenical China Study Tour (24 June to 9 July) I am more mystified and confused about China. The Christian leaders I met were good and kind people, but sang the tune about being independent. In China there was one constant theme — to modernize, to modernize agriculture, technology, the armed forces, education. If there is one thing they would welcome from foreigners, it is expertise in these fields.

"Recently we had a meeting about a nuclear reactor project across the border from China. We want assurances of protection from radioactive nuclear waste and strict precautions in the building and operational routines. But we are up against walls of secrecy and shifting personalities. There are strong British nuclear interests here. And there is anxiety about relying on China for our electricity needs. And, finally, there is Hongkong's annual 13% increase in electrical consumption to consider. In this issue I am standing on the sidelines. I now see that I was gravely mistaken in my opposition to the Mass Transit System here. It has caused inflation; it has increased the price of transportation; but it is a wonderful blessing. A half million people use it daily, and it has to be used to be appreciated....

"Each 'truth' of life is valuable insofar as we see its limitations and know with the eyes of the heart the 'greater than we perceive'. I am told that a certain man born blind had his sight restored. When his eyes focused on a blackboard he did not see 'a blackboard'. He saw a rectangle of black on a surface which bounded the space he was perceiving in the room. Our experience interprets for us the impulses registered on our retina. Part of our experience is our cultural conditioning.

"In New Testament times, when a man was sick, it was considered that he had devils in him. What kind of devil it was and what was to be done to expel that devil were the questions in their minds. In other more primitive societies the medicine man would apply appropriate remedies — plants, various extracts, charms, etc. — to heal the ill. It did work. And though we may smile at their naivete or their superstitions, we might also ask ourselves if our present understanding may not someday be quite as laughable. To a person trained in Chinese acupuncture there is a certain apprehension of symptoms and a certain procedure of application of needles to the body, which still evades our 'scientific' explanations, though its cures and results can compare favorably with the skills of 'western medicine'. To explain sickness in terms of bacteria, toxins and antitoxins administered by hypodermic might seem as naive in a hundred years time, as do those of the medicine men of less 'civilized times'....

"The highly educated man, the intellectual, often is not a man of faith and religion. Religious people are often rigid and dogmatic, and exclusive — even like those experts who can see values only in the light of their specialization. It is only the fuller man, the more deeply human, who can appreciate the value of his learning, and yet see its limitations and grasp what is beyond. As a school boy, I remember laughing about a man who failed an examination because he couldn't prove his own existence. The question of the existence of the self has been provoked by the realm of discourse or belief system in which we found ourselves. All our questions are born within a certain understanding. Thus, we say that the learned person is the one who can answer the 'right question'. It is only when one is transposed into an entirely different realm — as I was recently when I went to China — that one sees that in a different system, our question just does not exist....

"The more we are aware of our belief system, our frames of reference, the parameters into which we fit our experience, then the more accurately will we understand the value of our judgments and the clearer will be our knowledge of what we do not know.

What kind of devil it was and what was to be done to expel that devil were the goestions in their missis. As ather nicre primitive societies the medicine ran weeld copily appropriate remedies.—
Figure, verteus extracts, chains, etc.— to heaf the III. It all work. And though we may smile et their nativers or their superstitions, we might also atk aurelives if our present understanding may not sameday be quite as laughable. To a person trained in Chinese acupuncture there is a certain apprahension of symptoms and a certain procedure et and results can compare favorably with the evoles are scientific explanations, though its extres and results can compare favorably with the skills or twestern modicine. To extlain strainess in terms of backeria, toxins and antifaxing administrated by hypodermic might seem as naive in a hundred years turn, as do those of the medicine men of less civilized times.

Robert A. Brungs, S.J.

221 N. Grand Blvd.

St. Louis, Missouri 63103

And the property of the

we fit dure where we are awdre of our belief system, our trames of reference, the parameters into which we fit dure experience, then the more accurately will we understand the walve of aur judgments and the effects knowledge of what we do not know.