

The press and the electronic media are full of news of the new electronic information superhighway. Why have I a sense of *deja vu*? Perhaps it's because even in ITEST's life-span several utopias (or near-utopias) have come and gone. As we enter this "new age" with high hopes of solving our problems, we'll probably find a new snake in this paradise.

What new wisdom will speed along these superhighways? My guess is that it will be a semi-chaotic stream of factoids struggling for attention. If real life has an image to offer, it would be a crowded Interstate with semis demanding (and getting) space. The timid factoids had best stay in the "slow lane." Perhaps, too, we'll be able to work up to information jams to parallel the Interstates near the cities during rush hour. We already have more "infomation" than we can handle judiciously. What's a little more?

Another topic in the popular literature is *virtual reality*. In other words, we'll be able to live without really living. Admittedly, there's an important place in our civilization for "virtual reality." I'm thinking particularly of applications like flight simulators and other tools which (theoretically, at least) allow us to learn more quickly skills that could be gathered only more slowly and less safely. But we know that, like other technologies, this ability to interface computers and human minds will be turned to rather more frivolous pursuits.

I wonder whether "virtual reality" will tend to turn us from "real reality." As I sit in the comfort of my private world and listen to the greatest symphony orchestras in the world, I realize that not more than two generations ago I would have had to be in public to hear them every now and again. In brief, there is a "privatizing" aspect to this technology. I strongly suspect that will be true of "virtual reality" as well. I have already seen ads for a new wonder called CyberSex. That promises to be a *ne plus ultra* of solitary sex. Yet, as a Christian, I believe that there is an essential communitarian aspect to our sexuality. If I'm right, there's going to be even more of a challenge to the message of Christ. These are still rather unconnected thoughts about our new electronic networking. How much more private they will make us is worth watching.

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Robert Brungs, S.J.

The ITEST Bulletin: Publisher, Robert Brungs, S.J.; Editor, S. Marianne Postiglione, RSM

ITEST Offices: Director, Robert Brungs, S.J.
Director of Communications, S. Marianne Postiglione, RSM
221 North Grand Boulevard
St. Louis, Missouri 63103 USA

ANNOUNCEMENTS

1. The topic for the March 18-20, 1994 Workshop is *Secularism versus Jewish & Christian Secularity*. The essayists are Fr. Bert Akers, S.J. (political science), Mr. William Bentley Ball (law), Dr. Richard Blackwell (philosophy of science), Dr. Christopher Kaiser (history of science), Dr. Helen Mandeville (humanities), Edmund Pellegrino, MD. (medicine).
2. *The Science and Politics of Food* will be the topic of the October 14-16, 1994 workshop. Please note this date on your calendars. Dr. Robert Collier, ITEST Board member, reports that the program is coming together well. He is assembling a group of essayists on such sub-topics as food surplus, the science of food, international pricing mechanisms, production, distribution, religious ideologies, rural sociology, technology, and population.
3. Please let us know if you or any ITEST member has recently published or has received an award or recognition for your work, ministry, or notable achievement in your current profession. We would be happy to publish that notice in the bulletin.
4. The topic (working title) for the Spring, 1995 meeting is: "Risk — Perceived, Assessed and Real." Details on the structure of this meeting will be reported as they develop. If you have any suggestions for essayists for this meeting, please notify the ITEST staff.
5. The vast majority of attendees at the 25th anniversary Convention expressed a desire to have a similar celebration for the 30th anniversary in 1998. If any of you knows of a beautiful locale (with reasonably priced facilities), convenient to travelers, please let the ITEST Staff know. We would like to hold this meeting in such a place. We shall begin work on this meeting in early 1995. Any help we can get in locating "the ideal meeting place" would be gratefully received.
6. We hope to have the Proceedings of the 25th anniversary Convention completed before the March Workshop. It is late because of delays in receiving copyright permission from the National Museum in Washington. The volume will also include an up-dated ITEST membership list.

Sr. Antonia Maria, a Maryknoll Sister in Taiwan and a long-time ITEST member, was in a group of eleven who received a Republic of China Health Care Award from the Legislature Group of Health and Welfare. The President of the Republic of China, President Lee Teng-Hui, visited Sister on Palm Sunday morning to express his gratitude. Sister Antonia Maria relates that it "was a very special honor to be visited by this truly Christian gentleman. 'Christ is the head of his household', he told me." Sister Antonia expressed regrets that she could not be with us in Holyoke, "my old happy hunting grounds." The mayor of Holyoke and his wife are Sister Antonia's good friends. Congratulations, Sister Antonia, on your award! We have no doubt of your worthiness to receive it!

One of the nation's premier religious scholars and writers the Rev. Walter J. Ong, S.J., university professor emeritus of humanities at St. Louis University and long-time ITEST member, received the University's Sword of Ignatius Loyola Award. The sword is the University's highest honor and is presented to those who have made extraordinary contributions to humanity. Ong is renowned for his work in Renaissance literary and intellectual history, contemporary culture and the evolution of consciousness. A member of Phi Beta Kappa and Alpha Sigma Nu, Ong is a fellow of the American Academy of Arts and Sciences. He received his bachelor's degree from Rockhurst College in Kansas City, a master's degree in English from St. Louis University and his doctorate from Harvard University.

Congratulations, Walter, on receiving this award for a life well spent!

SOME THOUGHTS ON THE FAITH/SCIENCE APOSTOLATE

Robert A. Brungs, S.J.
Director: ITEST

This article stands as a valedictory of sorts. It was written by the author on his retirement from the National Conference of Catholic Bishops' Committee on Science and Human Values. The author was a consultant to that Committee for twenty years. It seems appropriate to publish a slightly edited version here as a brief statement of one perspective on faith/science work as ITEST moves into its second quarter century.

INTRODUCTION

With the celebration of the twenty-fifth anniversary of ITEST now a thing of the past and with the beginning of my thirtieth year of active involvement in the faith/science dialogue, it seems an appropriate time to put down some of my own impressions of this crucial apostolate.

I have personally been active in all the aspects of this apostolate. I began with the conviction that the real problem was the Church's lack of knowledge and concern about what was happening in scientific laboratories of the world. This became the first of our goals when ITEST was created in 1968.

It became clear over the years that this was truly a part of the problem, but not the most important part of the problem. Even though ITEST has been successful in meeting this goal, it now seems to be a small part of the need. The real need, I think, is evangelization and everything that that implies, especially for the laity. It is this notion that will be emphasized in what follows.

BACKGROUND

"Whatever things were rightly said among all men, are the property of us Christians." So stated Justin Martyr (c. 165). It is repeated in a somewhat different way by Augustine: "whatever they [here, scientist, etc.] can really demonstrate to be true of physical nature, let us show to be capable of reconciliation with our Scriptures."¹ This is the legacy the Church brings to the faith/science dialogue. It is an ancient testimony to the fact that the Christianity is the earthiest of all religions. It is also a testimony to the basic Christian openness to the "works of man." Despite all the criticism directed against it over the centuries, Christianity has been the most accessible of all religions to new ideas and new knowledge.

The faith/science dialogue is simply a subset of the more general problem of the place of human culture in the Revelation of Christ. In brief, it is a statement of creation in Christ, incarnation and resurrection. As such its history can be traced back to the very beginnings of the Faith. In fact, the encounter of God's Revelation with what we have come to call Greek culture can be traced back into intertestamental times, to the "clash" of Greek thought and practice with Jewish life. So, the faith/science effort in one sense brings nothing new to the Church. What is new is the fact that we have come almost full circle to intertestamental times in that the most crucial part of the dialogue is its effect on the lives of individual people. That element cannot be lost sight of. The faith/science dialogue is not simply an intellectual discussion.

This ambivalence, fortunately, has never been absent from the Church throughout its history. I say fortunately because the tension that has existed is evidence of a healthy search for the truth which is ultimately the Lord Jesus Christ.

To be honest, the voices in the Church on the matter of issues of faith and culture have always been ambivalent. In the earliest days of the Church people like Justin, Origen, Pseudo-Clement and Clement of Alexandria were very open to the ambient culture while Tertullian and Irenaeus, with different evangelical situations, were far less happy with "inculturation." This ambivalence, fortunately, has never been absent from the Church throughout its history. I say fortunately because the tension that has existed is evidence of a healthy search for the truth which is ultimately the Lord Jesus Christ.

One of the great ironies of the history of the faith is that the welfare of science, based on the intellectual foundations of St. Basil, was preserved and

fostered in the monasteries (and later universities), which were based on the discipline advocated by Tertullian and Irenaeus.

Biology has moved from cataloguing to commerce and industry. This may well be the most significant science/technology development of our lifetime — perhaps, even of any day, bar none.

Basil² in his *Hexaemeron* established the basis for the interaction between the faith and science in particular. Basil's essential position was as follows:

- (1) the behavior of the elements must be understood in terms of law ordained by God rather than in terms of their essences;
- (2) the heavens are corruptible like the earth so that the same laws of physics should apply to both;
- (3) nature, once created and put in motion, evolves in accordance with the laws assigned to it without interruption or diminishment of energy.

In many ways, the subsequent story of faith/science is a nuancing (sometimes even to denial) of these key elements of Basil. In our day, however, especially in view of the shift from physics to biology, they are hardly adequate to our need. There is another element in this history that we must notice. Kaiser³ phrases it in this way:

But the creationist tradition and Basil's contribution, in particular, were not just theoretical in nature. They had strong practical components that were closely related to the theoretical, but took on a life of their own and influenced the history of science just as much, if not more, than the theoretical. We have already discussed the importance of the liturgical concern for time and the regulation of monastic life as vehicles for the sense of regularity in the rhythms of the cosmos. In this section we turn to the healing and helping ministries of the early Church, rooted in the biblical beliefs of creation, resurrection, and the possibility of the miraculous, which, through the work of Basil and his contemporaries, gave rise to the Christian traditions of medi-

cal science and technology in the middle ages.

Especially in view of the growing centrality and importance of the life sciences, this tradition of healing and helping must be reconstituted as a cornerstone of faith/science dialogue.

OUR PRESENT CONDITION

Although we physicists may drag our feet in acknowledging the fact, biology has assumed center stage in science. We need not linger on this beyond noting that the little book of Erwin Schrödinger, *What is Life?*, may well be the most significant scientific event of the 20th century, nuclear fission and fusion notwithstanding. Shortly after World War II several physicists became interested in problems of biological science. Within ten years of its publication, Watson and Crick had identified the Double Helix, the structure of DNA. Molecular biology was off and running, with implications for human life that still are beyond our imagination. In its own way molecular biology represents the fullest expression of "the physics of living systems." This may well be the most important aspect of science in the 20th century. It will go a long way in determining the culture (and the lives of individual human beings) of the next century and, perhaps, of the next millennium. As a friend of mine would say to that, "we'll know more later."

One of the most important, if not the most important (nay, critical) issue that the Church will face is that the sciences, especially biological sciences and technology, are predicting the making of a new human.

Physics, and to a lesser extent, chemistry, had dominated the history of science (and, hence, the history of faith/science relationships) until the time of Darwin. Really, Darwin changed everything although it took many decades for this to be fully realized. Nonetheless, from the time of the publication of Schrödinger's book, the methodologies of physics were introduced into the life sciences. As a result, the life sciences over the last forty years or so have moved from a basically observational posture, through a very rapid and intense analytical phase, to a synthetic capacity.⁴ Biology has moved from cataloguing to commerce and industry. This may well be the most significant science/technology

development of our lifetime — perhaps, even of any day, bar none.

A Typical Doctrinal Issue

One of the most important, if not *the* most important (nay, critical) issue that the Church will face is that the sciences, especially biological sciences and technology, are predicting the making of a *new human*. Cosmological questions and astrophysics, as important and interesting as they are, pale in comparison with this prediction. We know that Christianity from its earliest teaching preached a *New Human* in Christ. Are these two *new humans* related or are they necessarily in conflict? I think that logically we can look at three possibilities.

Those who have gone into this area even a little are inclined to belong to a trendy wing of the theological community. This is a shame because the work of science and the cultural tendency we face and into which these powers will fall demand a significant development of orthodox doctrine.

One, these new humans (the Scriptural *New Human* and the scientific *new human*) are totally unrelated. That is at least a conceptual possibility. It is not, however, a real possibility for a Christian. That would say, in effect that there is no connection between "this world" and the "next world." To a Catholic that is anathema. Christianity, despite what we've done to it theologically and spirituality, is an earthy religion, as noted earlier. It's also an urban religion. It's the only major religion in the world — at least the only major one I know — that began in a city. Also, Christianity does not look forward to the recreation of Eden. Our future, insofar as it has been revealed to us, does not take place in a Garden. Rather, the New Jerusalem, the home of the blessed, is a city.

I don't intend to try to prove anything from this. It is, nonetheless a very suggestive use of images: there is some kind of a divine "urbanization program" taking place. Do I know what this involves? No, I don't. I do, however, think it is a compelling argument against a total divorce between this world and the next, between, in fact, the church militant and the church triumphant. Such a separation would certainly fly in the face of the Christian tradition.

The second conceptual possibility is that the scientific *new human* and the Christian *New Human* are identical — the one is the other. This option, I think, can be disposed of as easily as the first. Before anything else, the scientific *new human* is immanent in this world. The *New Human* of the Scripture and Tradition is eschatological, i.e., it will be reached only in the final Kingdom of God, in heaven. That's certainly reason enough to say that they can't be identical. At its very, very best, our life is sacramental and our activity has "only" sacramental value. We'll come back to this again later. Suffice it to say here that we await the transformation of the cosmos that will be definitive only when Christ comes back to us. Nothing we are able to do can accomplish that transfiguration which St. Paul talks about in Philippians and Romans when Christ will transform these wretched bodies of ours into copies of his own glorified body.

The third, conceptual possibility — the only one I think a Christian can accept — is that somehow or other these *new humans* are related. How? I don't believe we know. In fact, we hardly have a theology capable of asking the proper questions. I'm willing to go a bit further and say that for the most part the theological fraternity/sorority is hardly aware that there are questions to be asked. Nor do I see any indication that that state of affairs will change in the near future. Those who have gone into this area even a little are inclined to belong to a trendy wing of the theological community. This is a shame because the work of science and the cultural tendency we face and into which these powers will fall demand a significant development of orthodox doctrine. This is the major agenda for the church's doctrinal development for the foreseeable future.

In this mix I see two areas of particular need, *in vitro* fertilization and molecular biology. These two areas, especially when they are taken together, raise significant moral issues for Catholics, which issues in turn demand a significant development of doctrine. One thing seems totally clear: our current doctrinal understanding of the body *at most* allows us to begin to search for the proper *questions* we must put to the Tradition. At the risk of being reckless — especially since I am not a dogmatic theologian by profession — I'll include a reasonably brief doctrinal approach to these issues a bit further on. Before doing that, however, I'd like to call upon over 25 years experience in faith/science work to say something about the dialogue itself.

THE DIALOGUE

It is clear that there has been a significant increase in interest in what only recently was seen as an esoteric concern. I believe that there have been more "high-level" meetings this summer alone than there used to be in years. In the midst of growing attention to the faith/science dialogue it is necessary to be aware of many levels of issues and opportunities for evangelization. It is imperative, therefore, to keep several distinctions in mind.

1.) The first is the distinction between science/theology and science/faith concerns. I am treating neither of these terms in a pejorative sense. They are both necessary and both can be productive. All I am saying here is that they are not the same. They are no more the same than theology and doctrine are the same. I would classify as theology/science dialogue issues like the scientific method, how science affects the way we think as well as questions of cosmology. This type of issue tends to be concerned with epistemologies of one kind or another, on how we think or believe rather than on what we think or believe. Yet, any position that we assume as Catholic participants in dialogue has to be essentially based on what we believe. In other words, we cannot build systems apart from Revelation and Tradition. In my opinion, too much of the science/theology dialogue — and even of the faith/science dialogue — is overly defensive in terms of our basic religious assumptions. That, however, is another topic.

2.) Another type of theology/science dialogue — one much closer to faith/science dialogue — involves issues with a significant moral element which is generally lacking in the dialogue already described. These dialogues concern issues like genetic engineering, neuro-technology, death and dying, and so on. They tend to be philosophy of science/philosophy and/or theology discussions to the extent that the emphasis is on ethics rather than morality. Although they are valuable in defining terms, they tend to be rather more intellectual than affective. As such they are more appropriate to "experts" than to "practitioners."

3.) Finally, there are dialogues which center on actual scientific results and the credal and liturgical aspects of the Christian faith. These, I believe, are the most difficult but most important part of the faith/science dialogue. They are difficult because, in general, they demand an "ontology" more than an "ethic," doctrine more than morality.

This type of dialogue is concerned more with the questions posed by scientific advance and the opportunity these provide for Catholics to develop their understanding of and commitment to their faith.

They are important because they require a development in our understanding of the faith. They tend to concentrate on raising and refining questions rather than on providing answers. They are today's equivalent of the problems facing the early Councils like Nicaea and Chalcedon. In brief, they are translational and transitional between revelation and human knowledge.

A whole separate range of distinctions is involved in all of the above types of dialogue. These distinctions deal mainly with the people involved in the dialogue and in the purpose of a particular dialogue. In general, there are three models, each important and each with its own agenda and methods.

The first is the type of meetings that the Bishops' Committee on Science and Human Values is conducting with a group of people from the National Academy of Sciences. What is the purpose of such meetings beyond people getting to know people? One obvious goal is the exchange of information about basic approaches to issues — a why-we-hold-what-we-hold position. This type of dialogue is very significant because members of the NAS (and other such groups of "leaders") are often called on to help shape governmental postures and practices on issues with a significant scientific/technical component. Also, the bishops are given the opportunity to explain basic Catholic positions on this type of issue. They are able to show that these positions rest on solid foundations and are not simply some reactionary obscurantism.

A second type of dialogue is made up of the actual researchers in science meeting with those actually doing doctrinal investigation. This type of dialogue can be more wide ranging and open-ended than the more official type mentioned above. This type of dialogue is concerned more with the questions posed by scientific advance and the opportunity these provide for Catholics to develop their understanding of and commitment to their faith.

This type of dialogue can be the most intellectual

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of the three, but it can never be solely intellectual. It is really concerned with a dimension that Pope John Paul mentions:

For science develops best when its concepts and conclusions are integrated into the broader human culture and its concerns for ultimate meaning and value. Scientists cannot, therefore, hold themselves entirely aloof from the sorts of issues dealt with by philosophers and theologians. By devoting to these issues something of the energy and care they give to their research in science, they can help others realize more fully the human potentialities of their discoveries. They can also come to appreciate for themselves that these discoveries cannot be a genuine substitute for knowledge of the truly ultimate. Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish.

A third type of dialogue, perhaps the most important, is with Christians in science in order to introduce them to the riches of their faith. The rationale for this third type of dialogue is that these people are crucial in breaking down the myth of a conflict between science and belief. It is certainly a part of the evangelization promulgated in Vatican II and in papal encyclicals since the Council. Catholics in science are basically the only evangelists we have in the scientific/technological communities. I hear from many Christians in science that their work in science is called into question if they are discovered to be believers. Clearly then, the myth of conflict is alive and well and must be broken down before solid dialogue is as effective as it might be. Excellent Catholic scientists who are also real believers are essential to the success of all this effort.

It is clear that no one group nor no one type of dialogue is sufficient. In fact, the more groups that are involved, the greater progress there will be in this critical aspect of our times. As an addendum to this set of distinctions I would remark that probably the most crucial aspect of the across-the-

bench dialogue is the education of young Christians in science in their faith. The only place for any concentrated effort in this regard is the campus ministry center. In the United States, at least, most Christians in science will be trained in secular and state universities. In general, excellent Catholic university programs in the various sciences are a thing of the past. The only venue for significant faith enrichment, then, is the campus ministry program. Yet, very few campus ministry programs are disposed to work in this area and even fewer are equipped to do so. Most unfortunately, there seems to be little effort to remedy this very sad situation.

Please allow me a personal anecdote here. I went to Iowa State University at the invitation of the Catholic campus ministry center. Part of the program was a small get-together with "a few Catholic students in science." It was scheduled to last an hour or so on Sunday evening after the 7:00 PM Mass. The pastor expected that maybe a dozen students would attend. As it turned out there were more than 80 and the discussion went on for many hours.

What are we doing to fulfill this prophetic statement of the Bishops? It is clearly a significant part of the dialogue between faith and science.

I found an intense hunger on the part of these young people in science for an integration of their career in science with their Catholic faith. The real problem is that their knowledge of the faith is quite poor, despite the fact that many of them had Catholic primary and secondary educations. This type of "evangelical work" is extremely important in any faith/science dialogue simply because these young people will be the only evangelists we will have in the scientific/technical community. Much effort must be put into a fostering of the faith in this very important group of people. In this regard I would simply point to part of the intervention of the American Bishops at the Fifth Synod in Rome in 1977:

. . . evangelization and catechesis by scientists who are men and women of faith are extremely important. They should be encouraged by the church. They constitute one of those small groups which will be responsible for so much of the mission of the church in

the years to come. Scientists who acknowledge the reign of God should be encouraged to form communities where they may grow in their own understanding, experience and response to their Catholic faith, and where they show their insights into how the mysteries of redemption can be presented to their brothers and sisters who are seeking answers to the dilemmas posed by their scientific research.

Thomism, at least as it has been taught in this country, was far more directed to the "rational" aspects of the human being than to the "animal."

What are we doing to fulfill this prophetic statement of the Bishops? It is clearly a significant part of the dialogue between faith and science.

DOCTRINAL CONSIDERATIONS

All the central issues now challenging the faith revolve around our understanding of our *bodied* existence. This is true even of our basic understanding of the nature of the Church. Each age in the Church has its own genius and its own challenges. Those responses best suited to, say, the Middle Ages are almost certainly not the best suited to the 21st century. In the Middle Ages the theological thrust was concerned more with the soul than with the body. Thomism, at least as it has been taught in this country, was far more directed to the "rational" aspects of the human being than to the "animal."

I doubt that my training in philosophy was vastly different from that of most students of the Thomistic system. On the first day of class we were told that "man is a rational animal." We spent two years, eleven months and twenty-nine and a half days on "rational" and an afternoon on "animal." This is, of course, something of an exaggeration, but not too much of one.

In theology — I was trained in theology by one of the best theological faculties ever assembled in the U.S. — we spent a great deal of time on the union of the divinity and humanity of Christ. That was interesting, but it was terribly abstract, general and maybe even ethereal. It was not really directed to the central Christian revelation of God's covenantal love for his people. In fact, once the center

of the theological effort moved from the monasteries to the universities it became almost totally intellectual. Yet, as St. Paul stressed, it is love that makes the building grow. This is something, of course, that is well known; unfortunately we have not carried out the implications in our catechesis.

I suppose if every Catholic were to write down the points most basic to the faith each one would have a different view. At least I hope they would. That is a very healthy type of diversity, I believe, because we have no evidence that God's approach to us is the same for each of us. To put it more forcefully, I know of no evidence that God ever does the same thing twice. Thus, what follows is my *personal* statement of the essentials of the faith.

Thus, as Romano Guardini emphasizes in The Lord, God now has a body, God now has a destiny in creation. God has become part of human history, part of the history of his creation.

In the beginning God created the heavens and the earth. He made Man in his own image and likeness; male and female he made them. In the very beginning of his Gospel, St. John tells us that "in the beginning was the Word and the Word was with God. And the Word was God." St. Paul in that beautiful hymn in Colossians tells us that Christ is the image of the unseen God, the first-born of all creation, for in Him all things were created. All these quotes are talking about the same thing, the same Person.

The council of Chalcedon seven times in its formal decree proclaimed that the Word (the Logos) and Jesus, son of Mary, are *one and the same*. Therefore, since the Word is God, as the council of Ephesus tells us, Mary of Nazareth is *Theotokos*, the mother of God. Thus, as Romano Guardini emphasizes in *The Lord*, God now has a body, God now has a destiny in creation. God has become part of human history, part of the history of his creation. He has now, in Christ, covenanted himself to a particular people; we are a people set apart, as St. Peter says. This is not an "ethnic people," nor a "regional people," nor a "national people." It is not a people assembled along any humanly conceived division. His "people set apart" are the members of his church — those who have accepted his covenant. Note, however, that the "people" is not set apart to be apart, but to sing

the praises of God.

Christianity *is* the covenant. More than that, it is a covenant *in the body*. It is the new covenant in the body and blood of Christ: "This is the cup of my blood, the blood of the new and everlasting covenant." This is not the place to discuss the nature and history of the covenant — from Noah through Christ — even though it is *the* central notion of all of God's recorded creative and redemptive energy. Nonetheless, it is critical that we understand that this is the way God would be united with his creation — by covenantal overture and response in the body.

The covenant is in Christ's body and blood and the union he set up is of a marital and nuptial nature.

As Paul tells us, we enjoy the first-fruits of the Spirit, but we wait for our bodies to be set free. Paul says: "We are waiting for our bodies to be set free." He most emphatically does not say that we are waiting to be set

Pope John Paul II has stated that the "proto-covenant" — the covenant between God and creation with Adam and Eve — was a marital covenant. Certainly, the covenant with Israel, especially as preached by the later prophets, was a covenant between God and his bridal people, Israel. The Book of Revelation ends with John's description of the New Jerusalem, the City come down from heaven all dressed for God *as a Bride*. Paul in Ephesians talks about marriage as the sign of the bridal union between God and his Church.

Pursuing this brings us into Paul's thoughts on the Second Adam and the Second Eve. It is this nuptial covenantal relationship that is Christianity. Christ and Mary, by their obedience to the Father's will have assumed the headship of creation rejected by the First Adam and the First Eve. This part of doctrine, rather neglected for a thousand years, provides a fruitful entry into our understanding of the Faith in the very neuralgic areas arising from science, because it tells us of God's desire for our free response (and that of all creation) in love. The covenant between Christ and Mary is *integral* (it points to nothing beyond itself; it is in itself the reality to which all other created reality points).

We (and creation with us) are fully redeemed by

Christ (with Mary's free ratification of God's will) — though not yet. As Paul tells us, we enjoy the first-fruits of the Spirit, but we wait for our *bodies* to be set free. Paul says: "We are waiting for our bodies to be set free." He most emphatically does not say that we are waiting to be set free from our bodies. Scripture and Catholic living and worship does not refer to some "nature" out there doing something. It refers to specific, individual persons living out a life in the light of the life, death and resurrection of Jesus of Nazareth, the Son of Mary and of the living God.

Historically, theologians and philosophers constructed an intellectual model of the human as composed of two *principles* of being (body and soul) to describe the complexity of the human being. These principles of being in time became "things" in their own right (something the original authors would have firmly rejected). We use that language unthinkingly: missionaries go overseas, for instance, to "save souls." That's all right if we realize that at its best that phrase is merely a shorthand for "saving people." Souls are not saved. More, it is not heretical to say that "souls" are not saved at all. People are saved. To maintain that, I cite St. Thomas himself from a little known, and in my training never mentioned, work (ii lecture on 1 Corinthians 15): "Even if the soul should attain salvation, yet not I nor any human being." In short, the soul is not the human being nor is the human being the soul. Of course, this notion does not originate with St. Thomas. Irenaeus,⁵ in a very important passage of the *Adversus Haereses*, writes:

For by the hands of the Father, that is, by the Son and the Holy Spirit, man, and not [merely] a part of man, was made in the likeness of God. Now the soul and the spirit are certainly a *part* of the man, but certainly not *the* man; for the perfect man consists in the commingling and the union of the soul receiving the spirit of the Father, and the admixture of that fleshly nature which was moulded after the image of God.

I propose that the soul-body model, despite all the good use it has been put to in the past, is no longer capable of answering the questions we must now put to the revelation.

The most powerful questions are being put to the church in sexual matters — ranging from divorce to contraception, through abortion to *in vitro* fertilization and even finally to eugenics with a lot

of stops in between. These are not amenable to a body-soul model of the individual. Neither is an understanding of the union of Christ and church. The only model — as strange as it may sound on first hearing — is Christ's Eucharistic presence to us to give the Spirit.

It is traditional Catholic teaching that the Eucharist "makes" the church, is the continual source of the church. It is in the Eucharist that Christ is present to his church. The union of Christ and church is Eucharistic, is sacramental.

We must go back to covenant, to Mary accepting the covenant in which she would bear a son and name him Jesus. In her acceptance in grace of this Gift of God to creation she became the Woman, Israel, the Second Eve. All these are covenantal terms. In virtue of her *free* "yes" God became incarnate, assumed a body (from her) and took on a destiny, as Guardini insists. Mary, conceived without original sin and sinless her whole life through, was able in her acceptance of masculinity to represent the whole of creation in an *integral* (whole, unsplintered by sin) fashion. Mary's free acceptance of the covenant with and in Christ was indispensable to God's being with us. Nowhere are we told in revelation that God had a back-up plan in the event of Mary's refusal. God, as Romano Guardini maintains, has made himself weak and humble, lest he overwhelm us with his beauty and love. God clearly bends over backwards not to coerce us in any way. He wants our *free* acceptance and our *free* response to his overtures. This is something to remember whenever we talk about our covenant with our "meek and humble" Lord.

Mary's ratification of God's will extended beyond the moment of incarnation. Her presence on Calvary was necessary so that in the name of all creation she could ratify Jesus' gift of himself on the Cross. Both Christ's gift and Mary's ratification of that gift was needed for our redemption.

The church is also referred to as the Second Eve by the Fathers of the church. The church's union with Christ, however, is *sacramental*; it is not integral. The church, while growing in holiness through the presence and gift of the Spirit, is not sinless nor is it the reality of the union of God with his people. Rather the church's union with Christ *effectively* points to Christ's union with

Mary. We, of course, remember the Baltimore Catechism's definition of a sacrament as an outward *sign* instituted by Christ to give grace. It is a sign of some greater reality. It points to something beyond itself. Christ's presence to the church, and to us in the church, is Eucharistic. It is the covenant in the body and blood of Christ. It is traditional Catholic teaching that the Eucharist "makes" the church, is the continual source of the church. It is in the Eucharist that Christ is present to his church. The union of Christ and church is Eucharistic, is sacramental.

In the older theology, one could easily get the impression that Christian matrimony is on the fringe of the revelation. If we work from a theology of covenant, we find that matrimony is at the very center of the revelation. The sacrament of Christian matrimony "signs" the Eucharistic union of Christ and the church. As the Eucharist is the foundation and cause of the union between Christ and the church, so matrimony is its sacramental strengthening. It points to and effectively "signs" that union.

Thus the sacrament of human sexuality (matrimony) is the sacramental sign of the union between Christ and the church. Our sexuality lies at the very heart of Christian reality, namely, Christ's covenant with his Bride the church.

Sexuality is at the heart of any realistic understanding of our being bodied. I suspect, though I can't prove it, that the church will continue to see it as more important than our cognitive faculties, as more human than our neo-cortical character.

Many these days will dismiss this thinking with an easy declaration that the nuptial language of the church is merely metaphor, merely imagery. The church for the first 12 centuries was not so facile in declaring the nuptial imagery to be metaphorical. I find it quite instructive to note that through the time of Bernard of Clairvaux the book of scripture most frequently commented on was the *Song of Songs*, the celebration of the love of a man and a woman. They saw this love as an extremely important expression of the Christian faith. For that reason, if for no other, I don't believe we can write off the scriptural use of nuptial imagery as simply metaphor. (I am always amazed at the "sure grasp" opponents of sacramental realism have of

scripture's use of metaphor. They seem to know by some divine illumination what is metaphorical [almost everything] and what is not.) I'm reminded of a cartoon showing God standing on a cloud brandishing a thunderbolt. The caption, as I recall, was: "Metaphorical? I'll show you metaphorical!"

Sexuality is at the heart of any realistic understanding of our being bodied. I suspect, though I can't prove it, that the church will continue to see it as more important than our cognitive faculties, as more human than our neo-cortical character. We are bodied and our sexuality is written in every cell of our body. Contemporary science and technology are creating the need (a blessed opportunity from the Spirit, I think) to redevelop our doctrinal theology. Most people with whom I discuss this immediately start into ethics — we used more accurately to call it moral theology. I am not talking about ethics. I am talking about doctrine. I'm talking about another and deeper approach to the Psalmist's question: "What is Man that you are mindful of him, the son of Man that you should care for him?"

We are bodied. Our destiny is to remain bodied in glory. God's providence for us is most evident in our bodiedness. There is a period of a day or two in the history of the universe when *we* can be conceived. What are the odds of a particular sperm uniting with a particular egg in that period? Then multiply those odds by the odds involved in the conception of each of our ancestors over maybe 10,000 - 20,000 generations. That's the probability that any of us has of being alive. Either we are totally trivial and our being here has absolutely no lasting meaning — or we were deeply wanted. The same genetic probability holds for Christ as well, since he was of the house of David, i.e., had very specific ancestors.

Very much of our lives in Christ depends on our parents and our ancestors. A significant part of our worshipful approach to God depends on the body. All of the sacraments are *material* and all of them (except the Eucharist, interestingly) depend on the physical presence of (and communication between) at least two human beings. They are material signs and they are communal signs. They are covenantal signs and only that. The body provides the only means of communication we have with each other. We do not communicate by thought; we do it with words, gestures and changes in tone of voice. Indeed, a grimace or a smile may be worth many words and all uncommunicable thoughts.

No matter how many years or decades it may take for us to be ready to alter the shape and texture and function of our bodies predictably and reproducibly, we have already begun in small ways to work toward it.

Perhaps I say this only in my ignorance, but I think that God has chosen to communicate with us only through our bodies and particularly in and through Christ's body. Mystics seem to remember what happened to them, so the experience is clearly written into the brain.

Also, it is the body that makes us specific — another genetic gift from God. It is our bodied character that differentiates us from each other and from all other creatures, angels included. This is true on the level of the species, the sexes and individuals of the same sex. Our bodies both individuate us and allow us to be members of a community. We are not simply some material substrate that can be pummeled into any shape or form that someone else would prefer. We *are* bodied in a very specific way and *always will be*.

How we will be bodied here (and *maybe* hereafter) depends on the uses to which we shall put the new powers we are gaining from especially the biological sciences and technologies. We are clearly entering into a new era of human living. No matter how many years or decades it may take for us to be ready to alter the shape and texture and function of our bodies predictably and reproducibly, we have already begun in small ways to work toward it. Popularizers of microbiology, particularly, talk about directing further human evolution. This is eugenics — not necessarily in a bad sense.

But if we are going to direct our further evolution, in what direction shall we turn it? It presumes that we know the destination we want to reach. What is our goal as humans? Does science give us even a hint as to which direction it would be proper for us to go? No! Does philosophy? Not really! Does theology? Not yet. Does the Faith? Yes, it tells us the goal of our pilgrimage, but we have not spent much time or energy in working out an itinerary.

I shall list four guidelines which I think are a part of any attempt to "improve" ourselves and our stock. They probably are not exhaustive. I have been speaking of them for twenty years and I

... all of creation is awaiting freedom from sin and death. As we sin in the body, we are saved in it as well. Somehow or other we are being brought to share the divine nature, without losing our humanity.

haven't yet had anyone add any others. But that could change quickly if we really dedicated ourselves to this needed development of doctrine. The four are:

- 1.) Does the proposed physical alteration enhance our individual dignity?
- 2.) Does the proposed advance enhance our individual freedom?
- 3.) Does the proposed advance enhance our communal freedom? Does it enhance our ability to live freely in society? Is it ordered to uniformity or to the exotic? Does it enhance the sense of community and the reality of community?
- 4.) Does the proposed change enhance our ability to worship God? This concerns sexuality particularly, though certainly not exclusively.

It is too early in our recognizing the tremendous importance and beauty of our bodied existence to go into a great detail. What is of terrible urgency right now is realizing that Christianity is a religion of specifics, not generalities. It is urgent to realize that the incarnation is exactly that — God becoming human and remaining so. It is crucial to realize that God is forever a part of His creation and it forever has a destiny in Him. It is urgent to realize that the sacramental realism of the church must be maintained and to realize that human history is really salvation history. The history of the church contains the history of the cosmos. They are not distinct.

It is important for us to re-focus on the historical reality of the sacraments and of the Church. The Church is not just an assembly whose growth is founded on the faith of its members. It grows dynamically with the power of the Eucharistic Christ. I simply refer to the parable in Mark about the seed growing under its own dynamism (chapter 4). The Church grows "on its own." Like its members, it lives in a sacramental (and marital) relationship with Christ which points to his integral (and not sacramental) union with Mary. God has

a destiny in history in the Church. Even the angels, St. Paul tells us, learn the fullness of the mystery of Christ in and from the Church.

Also, it is doctrinally orthodox to note (and develop) the idea that *all of creation* is awaiting freedom from sin and death. As we sin in the body, we are saved in it as well. Somehow or other we are being brought to share the divine nature, without losing our humanity. The Greek Fathers of the church referred to this process as *divinization*. I am assuming the prophetic role proper to my being a Christian in stating that it may well be that, as we are being divinized, the world around us is being humanized. I do not know in any kind of detail what that might mean. I do know that there will be a heaven (and a hell). I know that we shall rise recognizably ourselves (with our own history, ancestral background and memories). I know that creation will be freed from decadence. I know that Christ will transfigure our bodies into copies of his own glorious body. I know that somehow (the how belongs to God, not us) we shall have been involved in the making of heaven — of course, the greater work will have been his. I know that all will be one (though it will remain itself) in the Father. That is the goal.

Our task is to help direct now the course of our bodied history. Rarely has any generation received so great and glorious a challenge.

CONCLUSION

If the goal of the faith/science dialogue is evangelization, then we cannot be defensive about the Church's centrality to human history and to the cosmos. If the Church is not the center of God's plan for his creation then I see no sense in belonging to it. Also, if the goal is simply to dialogue (to talk, but not to evangelize) then I believe we can forget Christ's mandate to "preach the Gospel to the whole world." I am old-fashioned enough to believe that our actions speak louder than our words. If our love for the Church and for Christ is not apparent, our intellectual attainments and our eloquence will have little long-term effect. In dialogue, whether it is with the National Academy of Sciences or Catholic graduate students, "passionate belief" will carry more weight than abstract intellectualisms. In other words, belief (and the hope it generates) is more appealing than intellectual argument.

I can think of no purpose for the faith/science

dialogue other than our evangelical duty to preach the Good News, in season and out of season. In this vein, we have to teach (and convince) Catholics that evangelization is a duty imposed on us in baptism and enabled in confirmation. To do that we have to show them that that is a part of our lives — without apology.

While scientists may know much more about the detailed workings of the human body and of the cosmos, the meaning of our existence in the body — indeed, the meaning of the whole of creation — has been revealed to us in the Church.

We must also let them know that they need no permission from anybody to fulfill an obligation. Furthermore, we have to convince ourselves and them that teamwork among all of us is critical. As one ITEST member mentioned at the ITEST 25th anniversary Convention, an army without a general is a rabble, a general without an army is ridiculous. Evangelization must operate at all levels of the dialogue and, as Vatican II and subsequent papal encyclicals have stated, they will operate effectively only "in community." Serious faith/science dialogue is really a cultural movement, requiring many inputs and many interests and skills. Above all, it demands faith, hope and love — and love is still the greatest of these.

A Protestant theologian of the last century, Horace Bushnell, noted that power always follows the direction of hope. Do we personally and communally have the faith in Christ that will make our hope in Him visible? Do we so share in Christ's love that it shows forth from us on its own? If we cannot show Christ's love vividly enough to validate our hope in the future, all the dialogue in the world will be futile.

I am convinced that we do have that love and that our defensiveness in the face of great scientific achievement is decreasing. While scientists may know much more about the detailed workings of the human body and of the cosmos, the meaning of our existence in the body — indeed, the meaning of the whole of creation — has been revealed to us in the Church. We have a duty in love to share it with all people with humility, kindness and the flavor of wit that St. Paul recommends. I am confident that with God's help we shall do so.

In our hearts we should carry the words of Athanasius

Like a musician who has attuned his lyre, and by the artistic blending of low and high and medium tones produces a single melody, so the Wisdom of God, holding the universe like a lyre, adapting things heavenly to things earthly, and earthly things to heavenly, harmonizes them all, and, leading them by His will, makes one world and one world-order in beauty and harmony.⁶

Our decisive task on earth is aiding in this work of the Spirit.

ENDNOTES

- 1 Augustine, *De Genesi ad litteram*, 1b, 1c 21, no. 41.
- 2 For a history of the relationship between Christian thought and science I would recommend: Christopher Kaiser, *Creation and the History of Science*, Grand Rapids: Eerdmans Publishing Company, 1991; Fr. William Wallace, OP, "History of Science and Faith," in *Transfiguration: Elements of Science and Christian Faith*, St. Louis: ITEST Faith/Science Press, 1993. Also, I would recommend any of the books of Fr. Stanley Jaki, OSB.
- 3 Kaiser, *op. cit.*, pp. 34-35.
- 4 By *synthetic* I mean the capacity to build or rebuild living systems — plants, animals and human beings.
- 5 Irenaeus, *Adversus Haereses*, V, ch. VI, no. 1.
- 6 Athanasius, *Contra Gentes*, 41, p. 26.

Kierkegaard observed that the only way to understand our lives is to trace them backwards, but unfortunately we have to live them forwards. The West lived so long off the accumulated riches of the classic and Judeo-Christian inheritance that it has taken centuries to achieve a kind of spiritual bankruptcy. Conversely, for us, after four centuries of conditioning, it is hard for us to imagine how our looking at Nature could ever have been otherwise.

Father Bert Akers, S.J., ITEST Bulletin, 1991

NOTICES OF RECENT BOOKS

Sister Mary Timothy Prokes, FSE, *MUTUALITY: The Human Image of Trinitarian Love*, Mahwah, NJ: Paulist Press, 1993, pp. 176, \$12.95, Paper.

Mary Timothy Prokes' new book is in her words, "about mutuality, that reciprocal self-gift that is foundational for a spirituality of interpersonal relationships. It is also an attempt to bring a 'marvelous exchange' between this 'theology of gift' and daily Christian life."

This work, which unites serious theological reflection on the intimate life of the Trinity with the immediacy of life, is timely now, at the end of the twentieth century, when we are longing for personal fulfillment and the desire for authentic interpersonal communion. It will prove rich and meaningful to all persons interested in a spirituality rooted in a trinitarian perspective. It will also be welcome in university courses on pastoral theology and ecclesiology.

This book can be ordered from Paulist Press, 997 Macarthur Blvd., Mahwah, N.J. 07430. Phone 1-201-825-7300 or FAX 201-825-8345.

Father Stanley L. Jaki, OSB, *Is There a Universe?*, New York, NY: Wethersfield Institute, 1993, pp. 130, \$8.95, Paper.

Father Stanley Jaki is a distinguished Professor at Seton Hall University, South Orange, New Jersey. He is an honorary member of the Pontifical Academy of Sciences and the recipient of the Templeton Prize for 1987.

This volume presents Father Jaki's Forwood Lectures for 1992. The Table of Contents lists the following chapters: Foreword; A New Science; An Old Insensitivity; Universes and Universe; Orphaned by Philosophy; Proofs and a Proof; Proof and Convincing; Index of Names; Index of Subjects.

Copies of this book can be ordered from Father Stanley, OSB, P.O. Box 167, Princeton, NJ 08542. The price is \$8.95 for the paperback book, plus shipping via UPS, for a total of \$10.00.

Doris Jehle/Gerta Scharffenorth, *Naturwissenschaftliche Medizin und christliches Krankenhaus*, Heidelberg, Germany: Forschungstätte der Evangelischen Studiengemeinschaft, 1992, pp. 218, DM 19.

This volume presents an analysis of the problems of hospitals in the health care field and steps for taking over the care of the needy. Interdisciplinary research work was applied to this complex topic.

The study looked at these problems in the context of changes in clinical work resulting from medical/technical achievements as well as in the analysis of more recent literature. It focused on the clarification of the contents of the work and the form of care as well as the work done in therapeutical processes of the hospital. From this base there are ways to qualify the care that developed. In conclusion, the volume contains recommendations for the carry-over to the emergency area.

Orders can be placed through FEST, Schmeilweg 5, D- 69118 Heidelberg, Germany.

SOME THINGS NEVER CHANGE

The following ideas are excerpts from the January, 1984 ITEST Newsletter. They were initially a summary of the discussion at the ITEST Workshop on *Science and Church*, October, 1983. These suggestions are still valid and useful ten years later.

To engage church leaders in the dialogue between science/technology and religion, ITEST must find ways to establish contacts with future church leaders while they are being trained in the seminaries. Seminarians should be aware of the advances in science and technology and of the theological implications of those advances. A side effect would be that perhaps some of the seminarians, so exposed to the issues, would decide to pursue the theological questions further or, at least, would maintain an interest in the science/technology/theology dialogue after leaving the seminary and remain literate in science and technology.

A spin-off of this idea is providing sabbaticals to seminary faculty to work with ITEST for a year to familiarize themselves with the issues which are part of the science/technology/theology discussion. A person completing such a sabbatical would be an asset in educating seminarians about the challenges science/technology pose to theology/religion.

Another place for scientific input into theological training is the diaconate. The diaconate might attract some scientists and technologists whose expertise should not be ignored by the church. Continuing education of the clergy is also needed to keep them abreast of the changes in science and technology and the meaning of these changes for the people they serve.

The idea of the sabbatical has another dimension — sabbaticals for scientists and technologists to teach in a seminary or to be present as a "scientist or technologist in residence." Scientists and technologists might consider the possibility of a sabbatical with ITEST. . . .

. . . . Articles prepared by ITEST members and made available to the religious press would serve to make ITEST known as well as to disseminate information on science and technology to readers of religious publications. Members also suggested the use of other media: video tapes, radio spots, talk shows, and television.

More effective use of the ITEST newsletter (now

the ITEST Bulletin) was suggested. Readers of the newsletter should contribute to it. This is an open invitation to all members and not a request to a select few. Contributions to the newsletter could include articles, book reviews, and bibliographies.

. . . . ITEST seems to be a well-kept secret. Several members attending their first meeting in October recounted how they learned about ITEST. Usually someone who had known about ITEST for some time happened to mention it to them. If, after learning about ITEST, they happened to mention ITEST to someone else they knew they discovered that that person also knew about ITEST's existence but never mentioned it. This is not a criticism of current ITEST members; it reflects the uncertainty that front-line scientists and technologists feel when it comes to seeking out other Christians who, like themselves, are concerned about the relationship between science/technology and religion.

The suggestion about the role of each member in obtaining at least one new member is related to other suggestions which surfaced at the October Conference. . . .

Networking among ITEST members in various areas could serve to strengthen the bonds of fellowship among members. Distribution of the roster of ITEST members would help members to find one another (This has been accomplished with the publication of the ITEST Membership Directory.). Small groups of ITEST members could serve another function of ITEST as a means of mutual support and encouragement to those concerned about the moral and ethical consequences of progress in science and technology. Moving ITEST meetings around might also foster the growth of ITEST in other areas of the U.S. (or the world for that matter). Both suggestions depend on the members knowing other ITEST members close to them and on the willingness of members to help set up conferences and workshops in other cities.

Networking also applies to establishing linkages with others who are not part of the ITEST com-

munity. To accomplish this, members suggested setting up a booth at professional meetings and sharing mailing lists with other organizations whose interest are similar to ITEST'S.

. . . . Input into the total educational arena is another suggestion. This involves finding ways to disseminate information about science/technology and religion to elementary and secondary schools and to colleges. A textbook for high schools and colleges would be one way of doing this. (The ITEST book, *Transfiguration*, published in 1993 could serve as such a text.)

Working with campus ministers and campus organizations is another vehicle for getting the word out. In preparing biblical and other study materials, campus ministers could include material from ITEST. This could serve to reach not only those students in scientific and technological fields but also those in other courses of study. Scientist-campus minister teams or scientist-theologian teams could be used to teach courses on the college level.

. . . . Other suggestions coming from the October Conference included: making ITEST materials available in Spanish (other languages too?); presenting legislative testimony on public policy issues; establishing an ITEST auxiliary to help with fundraising efforts. . . .

The brainstorming activity raised many possibilities. The members present expressed their concern that in efforts to increase membership in ITEST and to make ITEST better known two elements of ITEST not be lost in the process: 1) the familial atmosphere and 2) the ecumenical thrust. Speaking to the latter issue, Dr. John Cross noted that ITEST is an ecumenical group, one not found that much in contemporary American Christianity. It is a place where some of the artificial walls between the professions and churches can be broken down.

ITEST has made conscious efforts not to draw conclusions from the discussions at its meetings, conclusions which could be presented as the authoritative voice of a group of scientists and theologians speaking to questions of public policy arising from the work of scientists and technologists. ITEST has tried to not draw conclusions, preferring instead to keep the channels of communication open and the discussion moving, raising questions rather than providing answers. The need

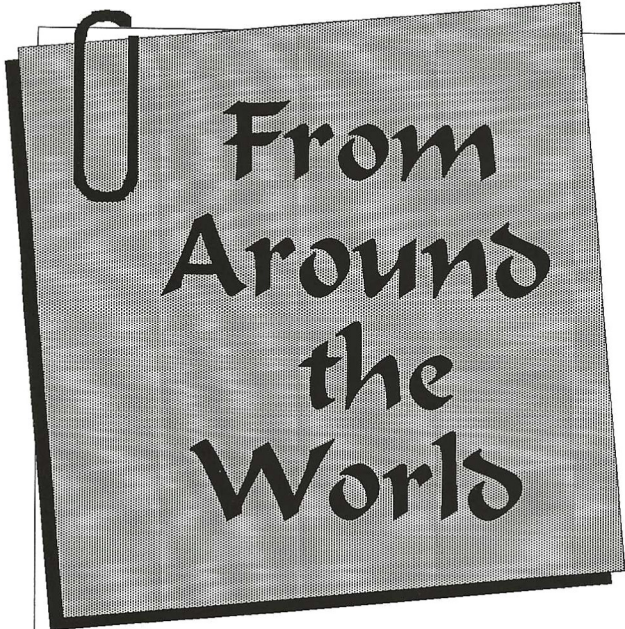
for an ITEST does not seem to be diminishing with the passage of time. The question is, "Can we or should we do more?"

Dr. Hanna Klaus reminded those present that the creative ideas which came from the group will remain only good ideas if they "did not go home" with the people present. The key idea — one already approved by the Board of Directors — is that members invite their friends and colleagues to join ITEST. . . .

Bob Bertram observed that sometimes we are not aware of the things we do that further the building of the Christian community among scientists, technologists, and theologians. Each ITEST member should ask himself or herself: "What do I think I do in my calling by way of penetrating the scientific or technological world in which I live my Christian faith?" This kind of reflection should, perhaps, be shared among members at ITEST meetings so that we might encourage, admonish, and console each other. . . .

The October Conference may have deviated from the announced topic of the Conference by taking an excursion into what can be done to further the growth of ITEST and make it more visible. That excursion, however, was not self-serving if we consider that one of the most important functions of ITEST is to be a locus around which Christians — scientists, technologists, theologians, philosophers, social scientists, lawyers, laypersons in all of these fields — can gather to share, to encourage, to inform themselves and the church, and to evangelize the scientific and technological community. The gathering of so many diverse people is a rare and happy experience in a world of specialization. It presents its own special challenges: those with different and distinctive vocabularies and jargon converse and explore the meaning of what is happening as science and technology continue to grow in ways which force us to ask more urgently, "What does it mean to be human?"

What does it mean to be Christian in a world in which human beings literally hold the future of the human race in their hands; not just through the power of nuclear weapons but through the power to alter the human gene pool? If power follows the direction of hope, those who continue to meet, discuss and share the future promise and meaning of these possibilities for Christianity are among the most hopeful and powerful people in the world.



From Around the World

AUSTRIA: Father Joop Schopman, S.J., now at the *Institut für Cristliche Philosophie and der Theologischen Fakultät der Universität Innsbruck*, writes about the religion/science effort in The Netherlands:

Although the Dutch have a strong tradition in both religion and in science and technology, there is no such tradition in the explicit encounter between the two. But there have been people with a personal interest therein, such as R. Hooykaas (Utrecht) and A.G.M. van Melsen (Nijmegen).

In some cases, such personal involvement led to wider ranging activities. In this way, in 1951 the Council for Church and Theology started a discussion group to stimulate an encounter between theology and science. This initiative led to a number of publications. One by C.J. Dippel and J.M. de Jong (1965) in turn initiated several discussion groups. One of these continues to the present day and will shortly celebrate its 30th anniversary.

This group '*Atomium*' consists of Protestant theologians and a number of scientists, not only from the natural sciences, but also from medicine, philosophy and other disciplines. They meet twice a year to discuss a variety of topics from the philosophy of Whitehead to environmental issues. Although (outside) authors have been invited sometimes, the discussions, by preference, are introduced by its members commenting on recent publications.

The group has not worked in splendid isolation. It has always kept in contact with similar groups abroad, particularly in Germany. From the beginning it assumed a role in setting up the European Association for the Study of Science and Theology, ESSAT. In fact, it hosted the second general meeting of this association. On the other hand, via personal contacts, *Atomium* has always had liaisons with the Dutch section of the World Council of Churches (WCC). The Dutch section of the WCC recently started a center, MCKS, *Multidisciplinair centrum voor kerk en samenleving* (Multidisciplinary center for Church and Society). It has been created by the need to extend the sources for the social-ethical thinking of churches and christians from theology to the human, social and natural sciences.

In addition to this cluster of activities, two others must be mentioned. One is *Het centrum algemene vorming* (center of general education) at the (Protestant) Free University in Amsterdam. This center covers a whole range of activities, one of which is the encounter between theology and science.

The other is *Het katholiek studiecentrum* (the catholic center of study) at the (Catholic) University of Nijmegen. This center has a function similar to the one in Amsterdam.

Of course, there are other activities, such a publications and meetings, which have the encounter of science and religion/theology as their theme. But they operate on a rather ad hoc basis.

This summary, however, does not claim any completeness. It is based on the personal experience of its author. Hopefully it gives some idea of those things going on in the Netherlands which might be of interest to readers of the *ITEST Bulletin*.

GERMANY: Dr. Eva-Maria Amrhein, co-author with the ITEST Director of *The Vineyard: Scientists in the Church*, writes: "I finally got in contact with some more scientists in the Schoenstatt Movement in Germany (physics and biology). We got six together out of about 44,000 active members. It seems extremely difficult to interest them in an institution (or better, community) with its center across the Atlantic Ocean. . . . This problem of 'rooting' the basic truths of our faith in the heads and hearts of the new generation is present all over the world."