



Science/Technology Education in Church-Related Colleges and Universities

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Keynote Address

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Rev. J. A. Panuska, SJ
President, The University of Scranton



Institute for Theological Encounter with Science and Technology
Cardinal Rigali Center • 20 Archbishop May Drive • Suite 3400-A • St. Louis, Missouri 63119 • USA
314.792.7220 • www.faithscience.org • E-mail: mariannepost@archstl.org

Keynote Address

Father J.A. Panuska, S.J., currently President of the University of Scranton, is former Provincial of the Maryland Province of the Society of Jesus. Father Panuska has a PhD in Biology from Saint Louis University. His scientific specialty is cryobiology.

Introduction

I am honored and delighted to be able to address you as keynote speaker of this workshop which will consider science/technology education in church-related colleges and universities. Myers Briggs profiles me as an “extrovert,” so it is wonderful to be able to give a keynote to a distinguished group like yourselves. I would hate to miss a chance like this. As an “intuitive,” I will enjoy the speculations involved in this workshop, the conflict of theories, and the various approaches to our topic. Even though a “T,” or a “thinker,” in this context I will have great difficulty in overcoming my feelings about the subject which are very strong due to my lengthy background in science and my almost equally lengthy background in educational leadership, not a term most faculty use to describe administration.

Also, as a “T,” wondering seriously if I was the logical person to give this keynote, I resisted the invitation and challenged Bob Brungs to demonstrate that I was suitable. Having once been Bob’s so-called Superior in religious life, and knowing how stubborn he can be, I knew that would be a losing battle. At any rate, I tried. You will experience the result.

As a “J,” or someone in the Myers Briggs “judgmental” category, I have a passion for planning things well ahead of time. For the sake of the workshop, this means that we do have a keynote address tonight. It also means that I have prepared my comments before reading all of your papers. Had I seen them early enough, I would have insisted that one of you give this talk. I have now read all which were sent to me and I realize that there will be some overlaps in presentations. At any rate, that would have been unavoidable. I hope that this evening will reinforce your own thinking and possibly challenge both your thinking and mine. Your papers challenged me.

Congratulations and Thanks

On this twenty-first anniversary of the Institute for Theological Encounter with Science and Technology (ITEST), I believe that we owe much gratitude to Father Brungs for founding and maintaining ITEST. I know that this struggle has not been easy., Surely, there was always that sticky question of a black bottom line. I know how hard it is for ventures like this to succeed over the long term. But Bob persisted through, the years. I congratulate and thank Bob, and I thank Saint Louis University for co-sponsoring this workshop.

Two Aspects

My paper will be divided into two sections. In the first part I will reflect on our topic in a more or less philosophical manner and in the second part I will present a series of observations, which may not appear particularly connected at the moment, but in the course of this workshop I suspect that relationships will develop.

Two Forms of the Same Reality

Just about everything I have to say in this first section can be summed up in one clause from the Constitutions of the Society of Jesus with which at least a few of you are familiar. This is a clause for which I have great respect, so much so that I had it engraved on a heroic statue of St. Ignatius which was dedicated at the University of Scranton as a “second cornerstone” monument during our centennial year: In *Omnibus Quaerant Deum* -- “In all things let them seek God.” In my view, God is blended with the world in a way which, while not pantheistic, is indeed

intimate. It is no surprise, therefore, that the relationships between theology (and religion) and science are many. And the relationships between science, technology and education in a church-related institution are many.

This conference will reveal many interrelationships, as can be anticipated from the various perspectives identified in the title of the papers: an administrative perspective, ideals and limitations, why church-related institutions should be involved in science, the feasibility of developing adequate science programs, our present situation, ways in which science/technology education can enrich the more general liberal arts emphasis, the ideal venue for teaching the relationship of science/technology society in human values, the importance of research and publication.

At least there should be no conflict between two things which are, after all, only two forms of the same reality although using quite different models for understanding: the direct (theology) and the indirect (science) revelation of God. And further, there should be no conflict between science-and the liberal arts tradition. They too are ultimately about the same reality.

When Father Paul McNally, SJ, was director of the Astronomical Observatory at Georgetown, he often presented a popular lecture in which he spoke about finding God in the stars and in the atom. It was an apologia of sorts, but it was more. It was a proclamation of the potential of the human intellect.

Father Matthew Ricci, S J, has always been honored for bringing Christianity to China by means of science. What is too often forgotten is that Father Ricci had done great things for the Chinese before he spoke to them one word about religion.

Let me give you another instance. The Jesuits are thought to have brought new musical forms to Paraguay (we claim many things -- in our humility). On the wall of the old Fordham University Community Refectory there was a colorful painting of Jesuits floating easily down a river, keeping their balance on a raft with apparently no effort (naturally!), intent on their music and their instruments, while the Indians rushed out of the jungle seeking the charming sounds. You will note that sometimes bishops react to Jesuits this way! Much was done for the natives before a relationship to God ever arose. Ricci gave knowledge which should have been a part of the Chinese culture; he shared with the Chinese some of the store of divine knowledge just as the Paraguayans received an insight into that beauty which is one manifestation of the divine.

In a similar context, the New England Province for years sent outstanding teachers to Baghdad where they could teach, expand the minds of students, but could not speak of theology. Relationships, however, developed. Other groups have done this in many parts of the world.

In other words, relationships develop from the simple communication of knowledge. There is a natural compatibility, a unity. There is bound to be, after all, it seems to me, an exploration into God. It is good that we have left behind us that vision of a great confrontation between the worlds of science and religion. That collision disrupted thought and paralyzed minds in 19th century England when Darwin stunned believers and destroyed religious peace.

The human mind was born to know and its restlessness for knowledge is akin to Augustine's awareness that our hearts "can never rest until they rest in Him."

More Directly to the Question

Now let me speak a little more directly about the role of science in a church-related university.

One could have a whole conference on the nature of a university or, to be more complicated, a church-related university. I'm not going to talk about either one in terms of definition, but I would like to say that, in my opinion, any Church relationship should be, and in most cases is, more behavioral than juridical. Of course, behavioral and juridical relationships are not mutually exclusive. Recently within the Catholic tradition, there has been

considerable discussion about juridical relationships. I do not consider this unimportant, but I believe that it is very far from the heart of the matter. In such considerations, shared purpose and purposeful behavior are far more effective than unwelcome and unenforceable juridical ties, but a juridical tie naturally can influence behavior.

Good For Science

Science within the Church-related educational context is good for the progress of science itself. I do not mean to suggest that pure science can be accomplished better in a church-related environment, but I believe that this environment could lead scientists to investigate questions which have great human value and which might possibly be overlooked in another type of environment. I believe that a church environment can have an integrating effect, or a broadening effect, on the scientist. This is something that is hard to measure since it is based on a subjective judgment, but I think that it is real. There is something psychologically stimulating that comes from a diversified environment.

In a church-related environment, the scientist may be less likely to have a perspective of the world that is overly dominated by scientific methodologies. The door is open to other approaches to reality. Life is less likely to be exclusive. Intense concentration on any research, whether it be in science or the arts can be narrowing. Broader visions and challenging experiences tend, in my experience, to encourage imaginative thinking, something which can only enhance the productivity of the scientific effort. Sciences should have an integrated view of the world, especially those sciences which touch the human person.

The cohesion of science and church-related universities should be mutually nourishing, both because of the science/church relationship and because the institution is a university.

Good For Church

What are the advantages for the church-related aspect of this question? There is the advantage of the continuity of a tradition. From the very beginning of education in church-related schools there was scientific education. And just as the church-related environment assists scientists to an integrated view of the world, so the presence of science helps the Church maintain an integrated view of the world. Churches do not deal simply with things of pure spirit, but of spirit acting through flesh and blood, with psychological, sociological and economic human relationships. Being “other worldly” is incomplete, just as being simply “worldly” is incomplete.

A complete university setting provides the Church with a special opportunity to influence students and professors in both scientific and theological disciplines. The more complete and honest the relationship, the stronger that influence will be. If there are to be any apparent conflicts in the human mind between religion and science, it is far better that those conflicts appear in an environment where there can be a healing, where there is time and intelligence for integration.

For these and other reasons, some of which I am sure will emerge in the course of our workshop, the presence of science and technology appears to me to be very important within the church-related aspect of our question. Indeed, I believe that science is necessary for the full development of the church.

An Educational Necessity

Now to the easy part. For me it is inconceivable to think of a university, especially one dealing with undergraduates, which does not have strong scientific programs as a part of its basic environment for learning. All of our school catalogues claim in one way or another that we strive to produce well-balanced persons, persons with an integration of knowledge, professionally competent -- ready for graduate schools or professional schools, ready for life. In my mind this means there should be a strong liberal arts base so that the view of the world is broadened and the past respected. Sensitivity to all of the elements of the present should result in future steps to be taken in the

context of history, present knowledge, and a long-range vision. I do not believe that in the world today, any more than in the world of the middle ages, one can have this balanced view, this integration of knowledge which leads to a fuller life and the capacity for fuller service, without science.

I believe that there should be serious science taught even in general programs, not merely soft introductions which could be obtained equally well from popular reading. Science is too important a part of our world to be given light treatment. As educators we have an obligation to see that this integration is accomplished.

I think that in order to achieve a balance even for the general student, it is important to have strong science departments, departments which are not only knowledgeable and can provide a solid major, but also are involved in scientific research. And, of course, there must be, an integration and a balance within the university itself.

To repeat what is probably an already clear opinion of mine: there is no complete university without science. Therefore, there is no complete Catholic university without science. Without science it is impossible to be in adequate contact with the world.

Universities have a responsibility to perpetuate scientific knowledge and add creatively to it. Religiously-related universities can add a perspective which broadens vision. Their scientific activities not only give them credibility, which is very important, but also help them to achieve their purpose both as a university and as a religiously-related university.

Additions

Let me add a few other practical comments and then draw this keynote to a close.

Although there have been cutbacks in federal support for science in recent years, external funding for scientific works through research grants and development of facilities is greater than for the humanities. Despite my affection for science, I believe that this is unfortunate, but nevertheless it is true. The presence of science in our schools opens the door to research opportunities and has the capacity to set a tone which can have a very positive effect on the creative aspects of university life in other areas.

When I first came to the University of Scranton one of my primary goals was to intensify the spirit of scholarly inquiry. I thought that this was healthy for the faculty themselves and certainly for the entire university, reaching both the graduate and undergraduate levels. The movement of one portion of the faculty in this direction is truly a stimulus to the entire faculty. I must admit that such a movement applies pressure on the administration to provide the necessary course loads, equipment, and other means to support this. It is not inexpensive, but I believe that it is both healthy and essential.

Another thing that I would mention is that at least for a number of universities, including church-related schools like the University of Scranton, excellence in science and technology can assist our outreach to the community at large in a practical way, which is truly helpful to our neighbors and also increases the appreciation of our communities for the value of having a vital university in their midst. This can often be helpful. At my university we have been intensifying this relationship dramatically over the past few years and I expect that movement to continue.

And Finally

Let me conclude by once again thanking Father Brungs and St. Louis University for co-sponsoring this conference. Congratulations to ITEST on its 21st year. Thanks to all of you for participating in this workshop.

God gave us a world full of wonders, beautifully integrated, remarkably balanced, but ever changing and sometimes confusing. In order to understand God and to become a gift ourselves we must move forward in our own lives

and in our schools as best we can with that integration of knowledge that leads to imaginative discovery. Such an integration in our church-related schools, such a remaking of ourselves and the keeping of our churches on course is not possible without the presence of science as a significant part of our educational systems.

I hope that this keynote will help to open doors to our discussions this weekend. I look forward to our sharing of ideas.

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