

(Address delivered by the Reverend Theodore M. Hesburgh, C.S.C., President of the University of Notre Dame, at the formal dedication of the Science Building at Saint Mary's College, Notre Dame, Indiana, Saturday afternoon, April 23, 1955)

### SCIENCE AND MODERN MAN

The surest path to fame and prestige in the world today lies in cultivating science. Science is the fairy godmother of our day: the giver of all good things, the arbiter of all difficulties, the sure promise of whatever spells progress tomorrow.

Science is more than a fad; it has become a religion, a consecrated way of thinking, a holy frame of reference, the *sancta* matrix of all that is promising and fruitful in our culture.

The scientist is the new high priest. His word is law, his idea is prophecy, his demands are sacrosanct. He speaks an occult language not understood by uninitiated who dwell outside the Temple of Science. Nothing is beyond the ken or the art of the scientist. Nothing too sacred to be questioned by him, nothing so established that he cannot overturn it if he will. Is God the creator of all? He was until the scientist found another and better explanation of causality. Is morality the unchanging will of God for order in

this world? It was until science appeared to found a new evolving morality based on statistics. Is truth an objective picture of the stable nature of things as we know them? This used to be the common persuasion among men until science introduced a more dynamic relativistic scheme of things.

We are told that we are fortunate people to be living in this age of science. People of other ages had to be satisfied with God, or truth, or beauty, or the good, but we, thanks to the new technology, have science, and with it, the blessings of supersonic speed for aimless travelers, electronic communication devises for thoughtless speakers, and H-bombs for those millions whose life span science has increased by seven years and six months.

If you think that I am speaking nonsense regarding the modern pre-eminence of science, you might note that at Notre Dame we built a new science building before we constructed the Hall of Liberal and Fine Arts, and Saint Mary's has followed our bad example. If I were less brave, or perhaps more prudent, I would, at this point, pick up my papers and run for the nearby woods along the river bank. However, you must have discerned by now that I am speaking half in jest.

Despite the timing and sequence of our building programs, there is something very significant in the fact that here both science and the liberal arts are acquiring a new home, the lion and the lamb are lying down together. This is the only rational approach to science today. Do not over-exult science. Do not fear or ridicule science. Wed it to the liberal arts and give it meaning and direction and purpose.

This is no distortion of reality for science is one of the liberal arts. There is no problem in making science a respectable member of a respectable family. There is a real problem in relegating it like a changeling giant to a mountainside cave, whence it will emerge full grown, but myopic, anti-social, and distorted for having lived so long in darkness and isolation and in cramped quarters.

Leaving allegory aside for the moment, there is much that can be ridiculed and resented in modern science, great though its accomplishments have been, wondrous its mastery of nature, and awesome its new found power.

What is saddest in the picture of modern science is the fact that it is unrelated to the greater divine and human realities that supercede it

in importance and scope, that alone can give science human meaning and purpose.

The highly specialized and isolated knowledge of science today is largely unrelated to the broader wisdom of philosophy and theology. The scientist himself is often so dazzled by the brilliance of his close-up view of reality that he sometimes forgets to relate the scientific fact with the philosophical or theological meaning that can put the scientific fact into the larger perspective of man, his nature, his life, and his God.

The scientist then becomes a person at the mercy of power without purpose. The scientist who is merely and only a scientist has a deep knowledge of isolated, segmented facts, but little understanding of the broad meaning of all things. He possesses great technical skill in doing things efficiently and effectively, but is hard put to explain which things are most worth doing and why. He has a great sense of utility, but little appreciation of the beautiful. The scientist who is only a scientist and nothing more is unfortunately a narrow man, unarticulate except for his own language of mathematical sign and symbol, unresponsive to many of the truly beautiful appeals of art, and music, unlettered in the warmly human experiences

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of literature and history, without a sense, therefore, of what man has been and can be. And the scientist schooled only in physical science is also often irreligious, unmoved by the great words that God has spoken, uninspired by the faith and hope and love of God that has been man's greatest power in scaling the heights. Nourished only by the antiseptic, narrow-gauge, god of science, the man of science alone has too often traded the Lord of hosts, unknown, not for a mess of potage, but for a Geiger counter or a slide rule.

I grant you that I have painted a pessimistic picture, that is, in many ways, a caricature. Even granting that the caricature is not true in its worst lineaments, it need not be true at all. There is no irreconcilable gulf between the knowledge of science and the knowledge of literature and art, philosophy, and theology. The same man who walks, can also run, ride, and fly.

I am not proposing that we tear down this new science building, brick by brick, instead of blessing it. Rather, I am happy to see it here and do bless it, because here science will be no isolated and restricted field of knowledge. It will develop side by side with literature, history, and the arts. Students here at Saint Mary's will converse across the test

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tubes and microscopes of Aristotle and Plato, Chaucer and Dante, Saint Augustine and Saint Thomas.

I would indeed be trifling with you, however, were I to insinuate that the mere geographic juxtaposition of two buildings, the one dedicated to science and the other to liberal arts, is more than an initial approach to the problem of science in the world today. It is indeed a beginning, and reflects a very important and very significant point of view. But the solution of the problem is much deeper. The ultimate solution must be effected by the mind - the mind of the professor and the mind of the students. Only here can the integration of science and wisdom be truly effected, for this problem is none other than the key problem in education today - the unity of knowledge. Education here, or anywhere else, will be truly complete and adequate only if this problem is honestly faced and solved.

It is even somewhat unfair to refer to the problem as that of science in the modern world. True, science is the focal point of the problem, for this is the age of science as no other age has been. The scientist is the child of this age. He cannot be singly blamed for the problem, if someone must be blamed.

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The philosopher, the literary man, the theologian are equally at fault, for like the scientist, they, too, have focused themselves almost exclusively upon their own disciplines. Historically they have done in their own ages of pre-eminence what the scientist is doing today.

Looking at the problem historically, perhaps no other age, as much as our own, has been in a position to solve the problem. It has taken all the past ages of man's intellectual history in the West, from the time of the pre-Christian Greek philosophers until today, for all of the branches of knowledge to reach a reasonably full development. Now that this development has come to pass, the problem of integrating all knowledge becomes a truly vital factor in our lives as educators, men and women consecrated and devoted to the full and adequate enlightenment of ~~the~~ human minds.

In the pre-Christian past, the Greek philosophers equated all knowledge with philosophy. There was no Christian revelation to give them a basis for the science of theology, and physical science as we know it today was largely undeveloped and unknown.

Theology came into its own in the ages following the revelation of Christ, Our Lord, the Greek and Latin Fathers of the Church gave us the

rich patristic literature culminating in St. Augustine, and later wedded to Aristotelian philosophy by the genius of Thomas Aquinas. But in the earliest age of theology, before St. Thomas, even the earlier Greek philosophy was suspect, and the embryonic physical science of the Middle Ages often was a cause of apprehension, as we see in the case of Galileo.

The age of science was the last to develop after the mighty impulse given to mathematics by Descartes and to empiricism by Auguste Comte. Philosophy and theology, already weakened by the Renaissance, gradually fell into complete disrepute, as scholars were increasingly fascinated by the lusty, growing infant of physical science, that in our day has grown into the veritable giant already mentioned.

We, in a true sense, stand today at the crossroads of knowledge.

The wheel of knowledge has come full round, and the situation is not happy. The theologian still lives too much in a world of his own to the consequent sterility of his theology. The philosopher has ceased to inspire and be inspired, since he has become so fascinated with the shadow that passes that he misses the reality of the substance that casts the shadow. The litterateur is most popular and most widely read today when he is incomprehensible

or sensational. And even the scientist, who is most respected of all, has begun to doubt that he is really omniscient - as the most controversial scientist of our day has put it - with the atom bomb, the scientist has known sin. And the most famous scientist of our age does not know whether or not there is a God. Yes, the wheel has come full round, and the scene is not a happy one.

Each segment of knowledge has had its day. Now is the day when we must face the herculean intellectual task of achieving the unity of knowledge that will recognize all that is validly known today, and all of the valid ways of knowing. We have had enough of philosophy without theology, theology without science, science without either philosophy or theology, and each of these without the true humanism of the literary arts.

What is needed today is the person, the professor and the student, who respects science and all that we may validly learn of the physical universe by the empirical approach of the scientific method; the person who also respects the intuitive insights of literature and poetry and the chastening view of history; the person who respects the power of the mind to speculate about those great and lofty ideas that are beyond matter and time and space,

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such as being, truth, beauty and the good, freedom, the soul, the mind itself, and the God who made all of these things; and, lastly, the person who recognizes that the Word of God, known and piously pondered by man, carries us beyond reason to see by faith the great theological truths, and the supreme power, wisdom, and love that is personified in God, Father, Son, and Holy Spirit, the source of all that is, the beginning and the end.

But what is needed most today is the respect for all of these knowledges, and ways of knowing in the same person, so that all knowledge is welcome and ordered and integrated in the same mind. Not a scientist here, and a philosopher or theologian there, but all, professors and students, eager to teach and to learn whatever can be known by whatever ways of knowledge, and, in the end, not merely a mass of information in the mind, but true wisdom ordering all, including the wise man himself, to the good life.

This is the high purpose to which Saint Mary's College is dedicated. This science building which we bless today is an important part of that dedication, a true focal point in the task before us.

May all who study here recognize that both God and man may be served by the findings of science, that the knowledge of nature and its secrets should be dedicated to the betterment, not the destruction, of man, that all the good things of the physical universe may be caught up in that vast liturgy of praise whereby man acknowledges that all that God has made is good if used according to God's plan. This knowledge of science makes man the master, not the slave of physical forces. And science, too, in this plan of wisdom acquires a new greatness in the service of Christ, the King of the Universe. To that great service we commend all who teach and learn in this building "until these walls crumble, and darkness becomes light, and we look upon the Face of God who is Truth."