

Science

CHILD OF FAITH AND SERVANT OF MAN

The belief that God made the world and that we are His sons gives us confidence not only that we can know Him, but that we can know the universe of His making. Confident science is — historically and philosophically — the child of faith, as Stanley Jaki documents. Cultures that do not believe the world is the creative work of a single, fatherly, God observe its hostilities and readily conclude that it has no hospitable purpose for mankind, perhaps no purpose at all, no order, no possibility of being known. Men with such uncertainties do not study the world consistently because they do not have the confidence that such study will be worthwhile or fruitful. They may even fear that some kind of unfatherly gods will be offended by the implicit reach for power implied in such studies.

In Western Christendom, once the weight of the corrupted Roman Empire had fallen away and after the barbarians had been converted, a process that took most of our first 1000 years, men took the time to reflect on the Book of Wisdom, chapter 11, verse 20, which states that Wisdom has made everything “by measure, weight, and number.” This assurance of order became, for Christians, an invitation to study: to find those measures, those weights, those numbers. This orderly and confident observation of nature was the birth of science, and it was not only harmonious with faith but was *born* of it.

Furthermore, the discipline of material fact is one of the essential experiences of education. Some things are so; others are not so. Truth and falsehood are real, and belief is not simply optional in a serious intellectual enterprise; it is demanded when the evidence is unequivocal. Natural science exhibits these philosophical truths in a particularly striking manner.

Believing, moreover, that God made the world as a home for mankind, and that our task is to increase and multiply and fill the earth and take dominion over it, the project of science becomes not merely possible, but mandatory. For we cannot

populate the earth until we acquire understanding and then control over — or at least protection from — some of its hostility: the wild animals, the wild weather, the processes of disease. Thus dominion over the earth is in direct proportion to our understanding of its natural processes.

If science is the body of knowledge about the natural and measurable world, several considerations must shape our approach to this body of information. First students need lots of meaningfully organized information. Second, students need to understand the thought processes behind the ordering of that information. Third, Catholic students need to have their faith specifically upheld in the several areas where it is under steady attack during the public sector science class. Finally, Catholic students and teachers must not underestimate the power of the sciences.

WHERE TO BEGIN

In the early years, children are so hungry for information, that very much can be collected, but it ought to be organized around some of the basic issues which are matters of curiosity to a small child and which remain important: How big? How far? How old? Except for the things they actually handle, the distances they walk, and the time they have lived, many people do not have a sense of size. How much bigger is the moon than your back yard? How much bigger is the sun than the moon? How much smaller is a virus than a grape seed? How far away are the stars?

As insight develops, a science curriculum ought to display the radical turning points in science, in terms of the questions that scientists were grappling with when they broke new ground. So presented, this discipline will encourage students to deepen their understanding of how the physical world works, and at the same time develop their own problem-solving strategies.

The neo-classical system of reading the great scientific authors is intended to accomplish this purpose, but it is of mixed value. Precious time is taken up with the study of erroneous information. The very essence of scientific curiosity is the de-

sire to learn the *actual order* of the physical universe. What is known of this order should be given to our students as expeditiously as possible, once their curiosity can be aroused.

Because of the long-prevailing climate of anti-Catholicism, it needs to be clearly stated that the leaders in every field of scientific thought have always included Catholics. It should be expected that this would be so, inasmuch as science is a search for truth, because truthfulness is natural to the religion of Truth.

And, make no mistake, it is commitment to truthfulness (experimental or otherwise) that makes science.

TWO ISSUES

Two issues of great importance are creation and evolution. The Church has never taught us to believe that creation happened on a specific schedule. The oft-quoted "Bishop Ussher" whose timetable includes a date for Creation was an *Anglican* bishop, and he made his calculations on the very eve of their absolute going out of date. It was 1646. Newton would shortly make the gravity implications of the Solar system so clear that geo-centrism must be a denial of gravity; almost simultaneously, Nicholas Steno (now canonized) published a work on geologic strata that unequivocally indicated a great age for the earth. The natural sciences were on their road to independence from Hebrew cosmology. Many of the great thinkers on questions of cosmology have been Catholic Christians, and the vitality of our faith cannot be nurtured with indifference to the evidence for an old universe.

About organic evolution, the Church has been hesitant because of its philosophical matrix, but we are free to believe that each living species, including man, was created from and through earlier forms of life rather than specially created from the dust. It is essential that Catholic students clearly understand both the evidence against evolution by accident, and the evidence for a single family tree of life over a long span of time. Usually the two are lumped together, as if one must take or leave both together; in fact they are not connected by either logic or

evidence.

LOOSE INFORMATION AND TIGHT POWER

Several dangerous attitudes dominate secular scientific education.

I have already mentioned creation and evolution, and it hardly needs to be stated that the secular insistence on an accidental universe and an accidental evolution is an attack on the spiritual nature and calling of man.

Besides this blatant attack on faith, science education generally feels like the collection of scattered bits of information, such as one gathers for a crossword puzzle or a game of trivial pursuit. Annual depth is severely limited, and the material is therefore inevitably boring. Even the best school children, those with encyclopedic minds that retain everything, however disconnected, are not actually satisfied. The normal human mind wants real food, the significant organization of extensive information. God has given to each child a vast curiosity, not a sedimentary mind.

Even worse than loose encyclopedism, however, is the combination of supposed career guidance and political spin that is prevalent throughout public science education. Every discipline is made into another excuse for teaching ecology and population studies in a manner calculated to generate anxiety about man's negative impact on the natural world and the great harm of child-bearing. This is contrary to the Christian call to take dominion over the earth; it suggests that man's role has been consistently evil, and that the earth in its entirety is a forbidden fruit, not a happy inheritance. This is simply not the case.

DEEPER ISSUES OF POWER

Can there be further dangers beyond even heresy, boredom, and timidity?

Science has already given us great power over nature, and all power over nature is, inevitably, power over other men, since our physical being is part of nature. To neglect science education is to raise a generation for slavery, because those who are educated will always have so much more power. This

is a serious and partly political problem that cannot be fought from the outside. We need our people in science: in prayer and in science both at once.

Furthermore, in a culture that proposes to accept only the dicta of the natural sciences as actual truth, the impression that religious faith is opposed to science is going to prevent the acceptance of faith as truth. Even the impression of opposition between faith and science is going to suggest that something that cannot be proved is pitted against something that can, and this will mean a loss of faith. It has functioned thus for several generations already; it is not a theory.

We must supply our students with the support they need to work these things out; it is too much to ask each one to do it alone against academe.

A FURTHER ESSAY

There is a further essay on the composition of a high school or 7th to 12th grade science curriculum.