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Natural Science Seminar

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Incidentally

by James Koldenhoven

Natural Science Seminar

The Faculty of the Natural Sciences Division here at Dordt College met for two weeks following the close of the academic year to attempt to answer the following questions: First, what are the implications of the Biblical teaching on creation, the fall into sin, and redemption for developing a Christian perspective on mathematics, the natural sciences, and technology, and how can this perspective be most effectively communicated to students? Second, how can teachers in the Natural Sciences Division, in cooperation with one another and with members of other divisions, effectively organize their classes and the curriculum to transmit the serviceable insights, both practical and theoretical, that they have to offer? And lastly, what should be the nature and place of research conducted by members of the Natural Sciences Division in order to enable them to carry out their task in scholarship and teaching?

The first week's sessions were built around three presentations by Dr. Calvin De Witt from the University of Wisconsin. De Witt is perhaps best known to readers of this journal as a co-author of *Earthkeeping*, a book dealing with Christian stewardship of natural resources, the result of a year of study by members of the Calvin Center for Christian Scholarship. His first presentation attempted to lay the philosophical groundwork for what was to follow. It was entitled "Application of the Doctrines of the Creation, Fall and Redemption in the Christian Liberal Arts College." This was followed by a panel response and general discussion. De Witt's second presentation dealt more specifically with the practical problem of making that Christian philosophical perspective concrete

in the structure and day-to-day efforts of natural science departments in Christian college settings. It was entitled "Implications of Serviceable Insight in Liberal Arts Education." As with the first presentation, it was followed by a panel response and general discussion.

De Witt's final presentation attempted to deal with the question of scientific research and was entitled "The Place of Research in the Christian Liberal Arts College."

One can perhaps summarize the three presentations by saying that the work of the natural science departments at a Christian college ought to find its philosophical foundation in the basic biblical themes of creation, fall into sin, and redemption through Jesus Christ. This gives rise immediately to some very important norms, the first of which is stewardship. Stewardship in the natural sciences means service to our fellow creatures, including unfolding, developing, and conserving the created order. It specifically implies developing, in both faculty and students, insight or wisdom, so that stewardship becomes a dynamic activity, an aspect of everyday life, rather than merely an abstract ideal. This kind of stewardship implies holism, that is, a perspective and a lifestyle which manifests integrality, coherence, and interrelatedness as characteristics of the created order. The norm of integration arises at this point. For example, the Natural Sciences Division members ought to be able to integrate basic biblical themes into their various curricula, integrate courses within their disciplines, integrate theory and practice, and integrate knowledge with life.

A biblical perspective also implies a sen-

sitivity to antinormative developments in science and technology and the task of the educator is critical here. Attitudes such as greed and self-interest can be manifest in many, often subtle, ways among those who work in the natural sciences and technology. The natural science departments at a Christian college must, therefore, be distinctive, not merely a scaled down version of what goes on at the state university. De Witt was quite to the point here as he discussed the nature of scientific research at a Christian college. Consistent with his stress on integrality, he emphasized that research must be supportive of the teaching mission of the college. Research and teaching must not be separated from each other. And the kind of research that can be better carried out in the high tech environment of the university or industrial laboratory, will likely not be appropriate to the Christian college science department.

At the end of the first week and beginning of the second week presentations were made by members of the seminar who were invited to participate but who were not members of the Natural Sciences Division. Dr. John Van Dyk, from the Philosophy Department, gave a response to the first week's discussions. Dordt College's President, Dr. John Hulst, delivered a presentation entitled "Science and Technology in Scripturally Oriented Higher Education." And Dr. George Faber, of the Education Department, gave a presentation in which he discussed the pedagogical implications of the work of the Natural Sciences Division.

During the second week, the seminar participants were joined by Dr. Arie Leegwater, professor of chemistry from Calvin College, who was invited to listen in on the deliberations, contribute his thoughts, and take an active role in the final evaluation session.

For the first days of the second week the participants were divided into three groups,

roughly identified as Life Sciences (including agriculture), Physical Sciences (including engineering), and Mathematics (including computer science). The members of each group were given the mandate of evaluating their curricula on the basis of the discussion of the previous week. This evaluation was to result in a report which would be made to the seminar participants as a whole. Those reports were made and discussion followed each of them. On the final day of the seminar Dr. Leegwater gave his appraisal of each of the reports. His insights were particularly helpful in getting the participants to look at themselves, and at the Natural Sciences Division of Dordt College, from the perspective of someone outside the college community who none-the-less shares the same faith commitments and philosophical foundation.

A true evaluation of the worth of the seminar will come in the next few years, as the participants attempt to work out practically the implications of what they have learned. The two-week exercise had immediate value for Dordt's two newest departments, engineering and computer science, since these departments are actively engaged in developing curriculum. The need to develop curriculum which is in harmony with Dordt College's Statement of Purpose is a particular concern in engineering and computer science, both because these areas have traditionally gone "unreformed" by efforts on the part of Christians to develop distinctively biblical curricula, and particularly because of the growing interest in these technological fields. The biblical themes of stewardship and integrality, if faithfully followed through, should result in concrete examples of what it means for the body of Christ to be the light of the world, even the technological-scientific world of the 1980's.

Charles Adams