fundamentalist students. Galileo showed that truly scientific concepts could not be heretical. He said:

> We bring new discoveries not to confuse minds, but to enlighten them, not to destroy science, but to put it on a sound foundation . . . The Bible speaks as the people of the time looked upon matters . . . In science man must begin not with the authority of the Bible, but with observations and proof. . . . The Bible cannot be at variance with the facts because God cannot contradict himself. It were risking the authority of the Bible, if when once facts are proved, the Bible were not interpreted to fit all these facts, rather than that man should go counter to the facts and proofs of nature (*3*).

In other words this is God's world. Fully applied I believe this doctrine would do much to resolve the conflicts between theology and science.

Pope Leo XIII used these principles in 1893. But Pope Paul VI does not mention them among the guidelines he would recommend to those who oppose his ban on artificial birth control. If the Pope were to consider the question of birth control in this light he might, in Father McMullin's words, "clarify points of faith and confusion" that seem to be splitting the Catholic world.

Catholic institutions would more easily gain the confidence of non-Catholic scholars if they were to follow the example of one Jesuit university, Xavier, at Cagayan de Oro, Philippines, which has put the names of Galileo and Copernicus with others in gold letters high on its new science building. There can be no doubt that Galileo is honored there for the sake of the ideas he was compelled to recant.

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Australia: Too Many Ph.D.'s

Singer's editorial, "Matching education to jobs in developing nations" (7 June, p. 1067), is directly relevant to a situation that has developed in Australia. An unawareness of the need to match the training of physical scientists to the job opportunities available in this country has led to a glut of doctoral graduates—a glut attested to by the number of Australian Ph.D.'s who continue to live in the United States for longer periods than they originally intended (*1*).

A decade ago Australian universities could not fill all their staff vacancies in the physical sciences, and the student working toward a higher degree had little doubt that he would obtain a research and teaching appointment when he graduated. Today the picture is totally different. The excellence and international standing of our universities attract a large number of foreign scientists to permanent positions here. Meanwhile the Australian graduate (who follows the traditional pattern of spending his early postdoctoral years outside Australia) is frequently unsuccessful when he returns home and attempts to get a job. Australian industry employs very few doctoral graduates and neither government-sponsored research organizations nor the colleges of technology can accommodate all those who are seeking employment. Thus it is not surprising, in view of the restricted opportunities, that the expatriate considers himself stranded overseas with little chance of returning to Australia.

An opinion frequently expressed by university teachers is that their responsibility lies in giving the student the best possible training. In the Australian context this generally means training him for basic research. At the same time, sometimes, he develops a distaste for applied science. Many of us working in universities welcome graduate students to assist our research. It speeds our own productivity, but it also means that more and more new Ph.D.'s, qualified in areas irrelevant to the nation's needs, find themselves seeking specialized jobs which are already scarce.

Undoubtedly Australian industry must find a place within its structure for basic research, but there is a necessity also for "coordination between academic curricula and economic development" (to quote Singer), fostered by the desire of the universities to engage in work that is important to the national economy. We may then have some relevance between supply and demand.

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