



Science as a Christian Vocation

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It was as a college sophomore in 1960 that I first realized anyone had a problem interfacing science with religion. My favorite science professor left because of teachings in the religion department. The conflict had to do with the creation story and Darwinism. It got worked out, finally, by people who better understood that science and God's creating were unified truth.

Christian faith is meaningless to some scientists because it seems to violate those principles they hold dear; that is, in faith there is a preceding commitment to belief without experimentation and no opportunity to test hypotheses about whether they are true. Conversely, to the Christian, scientific endeavor sometimes seems to ignore the spiritual dimensions in life and to threaten biblical beliefs.

Many great scientists, however, including Copernicus and Galileo, did not subscribe to this dualistic view of the world; instead they affirmed two paths to truth which complemented each other. As my life in medicine and faith unfolds, this has certainly been my experience.

Tuberculosis, mastoiditis, and polio were problems solved before my time, but I have been fortunate to be able to witness a yet greater explosion of medical knowledge since starting medical school in 1964. We have witnessed acute childhood leukemia, for example, once universally fatal and deemed unethical to treat ("Why put them through it if they all die anyway?"), now being permanently cured 75% of the time. During this period, being involved in science has even given

one prestige as the public has seen science solve many of our problems, improve our living standards, add to our comforts, and extend our life expectancy. Society has trusted science to solve its problems, including its hopes of avoiding death through organ transplantation and the study of the aging process itself.

In the case of the patient with cancer, I have found my hopes for scientific truth and Christian faith usually not to be in conflict. Instead, the battle with cancer provides common ground.

I remember enjoying dinner when one of my colleagues first called me back to the hospital to see Scott. He had come into our clinic at the end of the day with abdominal pain of two days' duration. When rolled onto his side during the examination, he had turned cyanotic and blue, and appeared more chronically ill to the experienced examiner than one with simple flu or appendicitis.

By the end of the evening, after CAT scans and further evaluation, we realized he had a malignant tumor of the right kidney (Wilm's tumor) which had already spread up the main vein

in his abdomen to his heart. This was confirmed the next day at surgery, when after an extensive operation involving removal of the kidney and extracting the tumor from the inferior vena cava and interior of the heart, the tumor was able to be excised completely. Then followed radiation therapy and two years of intensive chemotherapy, standard adjunctive practice for this lesion.

Six months after the cessation of treatment the disease relapsed in his lung and after one year of palliative treatment he died.

The lowest point for me was having to tell nine-year-old Scott and his parents that he had relapsed, realizing our attempts at cure had failed. The highest points were two: (1) the initial night when all the technology we had was brought to bear successfully on his problem, and (2) when I left my office three years later in the middle of a busy day to be with him the last two hours of his life.

Scott had stayed at home on a continuous intravenous morphine drip to control his pain for a month, was bedridden, emaciated and pale those last days. He had been no longer able to speak. His abdomen was markedly distended with tumor and the lung involvement distorted the configuration of his chest. He was sitting propped up on the living room sofa watching baseball on television. His breathing was infrequent and shallow as I arrived, but he still had on a baseball cap. He loved several caps, and during the time I knew him he was loyal only to the team that happened to be on television that week. His friends had stopped by on their way to school until about two days prior. His parents and I propped pillows, fussed over him physically one last time to help ourselves cope. We watched his life ebb away and stop. We hugged and wept almost three years worth.

Of the two high points, the last was the richest one for me. Patients were waiting as I drove back to work in my sorrow. I realized technology had let us down, but I did not feel defeated. We had not cured Scott, but we had cared for him every day and healed him and ourselves in many ways during the process of his illness. Scott died without fear, expecting to see his grandparents in heaven that

day. I went back to trying applied science again on the oncology ward. It is still mind-boggling to me when a 25-year-old six-foot person who had leukemia fifteen years ago comes back to see me. But when my career is over, it's Scott Johnson whom I'll remember the most and look for the soonest on the other side.

How can working in a scientific vocation be a response to God's work in creation? My medical diploma says "Doctor of Medicine, with all its privileges and obligations." The obligations are many—to keep up with new knowledge, to deliver bad news, to disappoint my wife and family for others' demands, to get out of bed at 2 A.M. when the city is asleep on a cold January night.

But offsetting these obligations comes great privilege—privilege to be important to people in time of real need, to have the immediate confidence of strangers in the office, to be trained to help people regain life or assist in death and sorrow.

Last week someone asked me how I could take care of cancer patients: Wasn't it awfully depressing? Why not deliver babies? I responded, "Taxidriviers can deliver babies," but I knew the response was trite. What I should have said is basic to the integration of faith and scientific vocation. The person who asked knew there is a burden as a physician which few others have to

bear. Being in charge of the patient's physical well-being, connecting with them emotionally and spiritually, then losing them, is often associated with feelings of intense loss and failure. Pastors and friends who support the ill person have responsibilities, but ours are different. Only if we realize that the God of the universe also cares for the giver of care, can discouragement be softened.

In the movie *Ordinary People*, the son finally realized his mother couldn't handle messes in their lives. In medicine, we see perpetual messes. Our faith seems to give these messes more meaning, even opportunity. A patient told me just before dying that the last two years battling colon cancer were the best years of his life. Despite chemotherapy to slow down the progressive liver involvement, he and his wife had travelled, enjoyed small things more, had more intimacy, and left nothing unsaid. I chalked him up as a therapeutic success.

There are some problem areas, however, where medical science and my faith do not always entwine.

In 1988 I had an opportunity to travel in Central America. The most difficult part of the experience was re-entry at the Miami airport and the return to my home congregation and to work after being in the presence of people willing to be martyred for their faith. In Nicaragua the presence of war and poverty and the lack of technology only strengthened the message of the gospel. There was hope and joy which is unparalleled except in small pockets in our culture. Even the most politically unsympathetic in our group saw this clearly. No double-blinded, controlled studies were needed. We think we can solve our problems if we just bring "American know-how" to bear. Central American life contained many of the features our society lacks and needs despite mere third-world science and technology. A woman was dying in a regional hospital of diabetes for lack of insulin. I could have brought enough in my suitcase to last her for two years. Yet the staff

morale and willingness to care for the sick exceeded that found in our facilities and had little to do with access to supplies.

As time passes, there is another area in which science and faith seem to be on a collision course. Our greed for convenient technology is threatening to ruin our environment. In medicine, the costs of our achievements have made insurance and even a 1960s level of access to health care impossible for millions of our citizens. This is medicine's brand of pollution and illustrates the death side of technology without justice and love.

As investigators work to conquer cancer, heart disease, and stroke, we are being faced with an even more difficult set of circumstances: aging, degeneration of the body, and prolonged dying and dependence. Being a Christian physician twenty years ago was no less rewarding than today. The opportunities to care for the sick were present then, and they will be in the future even if knowledge should decelerate to allow resources to be spent more equitably.

Personally I have also experienced medicine's limitations. My wife and I have two daughters, both of whom have neurological handicaps. Science has provided neither the reason for nor a solution to their problems. Peace with their limitations came rather from the perspective on the nature of wholeness and worth provided by faith.

Science and Christian faith are both revelations of God's creation and love. Both are available from outside ourselves through providence and grace, waiting for discovery and

refinement. Taxol and Vincristine, two anticancer drugs, are extracted from the yew tree and periwinkle plant, respectively. God knew this a long time ago. We found Taxol just this year when people began living long enough to develop ovarian cancer more regularly.

There is nothing in scientific truth that God has not already created. We are merely discovering for ourselves the complexities of creation and finding small ways to manipulate and understand it for our “benefit.” Scientific discovery, then, is not unrelated to the revealing of God’s nature through Christ. For me applied science is not nearly as frightening or awesome as reading some of Jesus’ parables of applied justice and love.

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