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Dating the Grand Canyon
Surgeon General Richard Carmona
The Beauty of Bugs
Writing Murder Mysteries

Life at the Intersection

by Margaret Regan

When Tadeusz Pacholczyk, a Catholic priest and neuroscientist, was a boy growing up in Tucson, there were plenty of scientists coming around the house. His father, Andrzej, was a professor of astrophysics at the University of Arizona, and he and his colleagues routinely engaged in animated conversations on the history and philosophy of science. Most fascinating to young Tad, though, were the astronomer priests from the Vatican Observatory affiliated with the university.

"They discussed interesting topics on the supposed conflict of faith and science," says Pacholczyk, speaking by telephone from St. Patrick's Rectory in Falmouth on Cape Cod, where he is a parish priest. "I realized I needed to prepare myself scientifically and bring science into the church."

These men who combined faith and science ended up as unwitting models for Pacholczyk's life work. After his ordination as a priest in 1999 in Rome, he has emerged as a leading church spokesperson on what he calls beginning-of-life and end-of-life issues. He's been particularly outspoken in presenting the Catholic Church's opposition to cloning and embryonic stem cell research, testifying in December 2001, for instance, before the Massachusetts Senate that "embryonic human life is inviolable and deserving of unconditional respect."

As soon as he finished his seminary studies in Europe, he received invitations to lecture on stem cells and cloning and end-of-life issues, including euthanasia. "That ministry has mushroomed," he says. "It's an area that I understand pretty thoroughly because of my background."

That background is extraordinary. Pacholczyk, now 38, earned two degrees in advanced theology at the Pontifical Gregorian University in Rome, where the church sends its most promising priestly candidates for training. But before becoming a priest at the age of 34, he'd already done a postdoc at Harvard in neuroscience, and he picked up a Ph.D. in the same subject at Yale in just three-and-a-half years. And then there are his four undergraduate degrees — in molecular and cellular biology, in chemistry, in biochemistry, and in philosophy — all from the University of Arizona, where he graduated magna cum laude in 1988.

Pacholczyk says he received an "outstanding science foundation" at the UA, which he began attending part time when

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he was still a junior at Canyon del Oro High School. He was raised along with four sisters in a devout Catholic family, and though he accepted the faith "in a true sense" when he was about 15, he was not yet thinking about becoming a priest.

"I had my focus on science and medicine," he recalls, "with thoughts of becoming a physician or research scientist."

But at the age of 17, on a trip to Italy, Pacholczyk happened to be reading *Lives of the Saints*. He was particularly struck by the

tenacity of St. Thérèse of Lisieux, a 19th century French-woman. When she was judged too young at 15 to enter the convent, she pled her case first to the Mother Superior, then the bishop, then to the pope himself.

"Her persistence in going after what she knew she was about — that was a Eureka moment for me, a wake-up call. I knew I was called. But I realized part of that calling included science."

He persisted in his plan to get a rigorous science education before studying theology. After doing immunology rotations at Yale, he switched to neuroscience because he

of Faith and Science

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extraction of the stem cells. But Pacholczyk argues that this viewpoint is "utilitarian," and uses good ends to justify bad means.

"All of us have our origins in the embryo," Pacholczyk says, "and embryos should not be instrumentalized for research purposes, even if the ends that might be obtained through that research are indisputably very good ends. It would not be acceptable ever to do this kind of research that depends on embryonic destruction."

In Pacholczyk's and the church's view, an embryo must be respected as a being with its own genetic identity, distinct from both parents.

"My point of departure is good embryology," he says. "What does embryology tell us about early human life? The church has studied the question closely."

"An embryo is a human being, a being that is human, that is not some other kind of animal. Whether it's a person yet at the moment of conception, whether it's been ensouled — those are very interesting intellectual discussions but they're not ultimately relevant. In the moral analysis, what's critical is that once you're a being who is human, a being with the potential to become an adult, then you are a bearer of human rights."

Scientists should pull back from the cloning "slippery slope," in which short-lived embryos would be created for the sole purpose of servicing another human being. Better, says Pacholczyk, would be to concentrate their research efforts on "nonmorally problematic" alternatives.

"Adult stem cell research has been used effectively already," he says. "Whenever you get a bone marrow transplant, for immune or blood diseases, those transplants work

because there are adult stem cells. We transplant them out of the other person."

Recent efforts to transplant adult stem cells into people with spinal cord injuries have had promising results as well, he notes. And umbilical stem cells — extracted from the umbilical cord at the time of a child's birth — have been used to treat a variety of ailments, including leukemia.

Pacholczyk realizes that he's almost a lone scientific voice crying in the wilderness, and he says he understands what drives his fellow scientists who are at the forefront of cloning research. "Their concern is to push science forward. I respect that passion. I know what it means to live in the lab 24/7."

realized that field was more likely "to deal with questions of ensoulment, of personhood, and mind-body relations." A coauthor of some seven scientific articles and four abstracts, he published his dissertation research, on norepinephrine transporters, in a coauthored paper in *Nature*. In his post-doc at Harvard and Massachusetts General Hospital, he made use of DNA sequencing to study the structure of membrane sodium pumps.

The solid science stands him in good stead in navigating the difficult subject of cloning and embryonic stem cell research, now embroiled in political and ethical debates.

"Good science should be the point of departure for doing ethical analysis," Pacholczyk maintains. "I always do the first half of my talks just on the science. The second half I focus on the moral concerns."

Some ethicists, and even some opponents of abortion, believe that it's acceptable to clone embryos for therapeutic purposes — such as when their stem cells would be injected into patients suffering with Parkinson's disease or spinal cord disorders. Such embryos, of course, do not survive the

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Cory Silken photo, courtesy of *The Pilot*