

[ON THE DISTINCTION BETWEEN THE MIND  
AND THE BRAIN]

"All we are waiting for now is a physicist who will discover and describe for us the electrical energy that we know is in the brain, that runs the computer and sends billions of messages going back and forth in the computer all the time; tell us how it works. When the brain wakes up, the mind wakes up and immediately takes charge of certain areas. Therefore there must be a form of energy not yet discovered by the physicist, and I predict that when we get that, then we'll understand how the mind receives its energy. Because it has energy. It has initiative. It can do things with the brain. It can open the files of memory, which are in the brain, just as they are in any computer. The computer is helpless, perfectly helpless, until an outside, conscious mind comes to it and programs it; then it becomes a functional thing."

Ten years ago, over 60 per cent of the doctors in Quebec and half of those in the rest of Canada were specialists. After the enactment of medicare, medical students began to show a greater interest in general practice. Today 70 to 80 per cent of the graduates are becoming family or general practitioners.

## McMaster's Degree

McMaster University's medical school has no exams, no marks and no admission tests. Candidates need only have a B average in at least three years of any university-level program. It is not, however, an easy place to get into. Applicants must also send a detailed autobiographical letter, and those who pass are then interviewed for an hour simultaneously by a physician, a community layman, a medical student and an administrator. Half of the school's three hundred students are women.

The school's goal is to develop a new kind of physician who can work independently to solve health problems, recognize social issues and relate them to the patients. The graduates are intended to be primary care physicians — the first ones patients see — expert in family practice, internal medicine, obstetrics and gynecology. They must also be able to integrate social and psychological factors in diagnosis and treatment. In training groups, three to five students consider a case with complex medical and social problems, and each researches one aspect. They meet and discuss their findings twice a week.

## Insulin

In the summer of 1921, Frederick Banting and Charles Best, under the direction of J. J. R. Macleod, MD, worked on a six-week deadline in a borrowed lab at the University of Toronto searching for a substance to control diabetes. They were certain that some natural substance prevented most people from getting the disease. Banting sold his car to buy experimental dogs, and the two scientists ate and slept on the premises. They believed the hypothetical secretion was in the pancreas, since some thirty-two years earlier another researcher, Oscar Minkowski, of Strasbourg, France, had discovered that dogs died of diabetes when their pancreases were removed. By the end of the summer Banting and Best had extracted insulin. Within six months it had been purified and used to save the life of a 14-year-old boy. In 1923 Macleod and Banting were awarded the Nobel Prize for Medicine.

*Experimenting with this dog, Marjorie, Frederick Banting (right) and Charles Best demonstrated that insulin could control diabetes.*

