

CHAPTER 5

Memories of a Key Meeting

James Arthur

“Rob Prichard... spoke with passion ... of the fundamental importance of mathematics to the modern world.”

Lacking a diary, I looked over my CV for guidance in recalling the earliest days of the Fields Institute. I was surprised to see a number of formal duties and ties to the Institute over the years that had escaped my memory. I hope that this admission does not lead a reader to doubt the accuracy of my recollections below!

In any case, I believe it was around 1990 that Bill Shadwick and others began to promote the idea of a mathematical research institute in Ontario. At that time, Canada had one such institute, the Centre de Recherches Mathématiques (CRM), at the Université de Montréal. It has been very successful and, even in 1990, had attained a widespread reputation for its many important conferences, workshops, and longer periods of specialized concentration, as well as for its visits from leading international mathematicians.

There was considerable opposition to the idea. A number of mathematicians, especially from outside Ontario, felt that Canada could not support more than one major institute. There was also concern that if the institute was not successful, it would impose burdens on mathematicians in the province that could undermine their ability to do mathematical research. There was even some opposition to the proposed name of the institute, especially its promotion on the basis of implicit ties to “the mathematical equivalent of the Nobel Prize.” As an aside, I think it is fair to say that the Fields Medal today, with its continuing upper age limitation of forty years, has regained some of its original standing as a celebration of the future vitality of mathematics.

Nevertheless, Shadwick was unshakable in his determination to bring the institute into being. His countless interventions with government, universities, scientists, and members of the broader public were at last rewarded. The Fields Institute was established in 1992, with Jerrold Marsden serving as its founding Director. It was temporarily based at the University of Waterloo, with the understanding that a permanent home would be determined later.

A Permanent Home

My most vivid memory of these early years is connected with the process for choosing a permanent home. When I returned to Canada as professor at the University of Toronto in 1979, I was somewhat surprised at the rivalry among mathematics programs at the various universities in Ontario. In retrospect, this was perhaps an understandable feeling among departments making their way in the rapidly expanding world of international mathematics. Nowadays, I think that Ontario (and Canadian) mathematics departments see each other more as allies than competitors.

But in 1992, the search for a permanent base for the Fields Institute was expected to be somewhat divisive.

I do not recall the composition of the selection committee, but I do remember a key meeting of this committee with the Director and other administrative members of the Fields Institute, together with administrative and scientific representatives from the affiliated universities. According to a note I seem to have retained, it took place on Saturday, March 27, 1993, 12:30 to 3:00 p.m., in the Council Chamber of the University of Toronto. Everyone present was given the opportunity to address the committee. Jerry Marsden, looking every bit the director of a serious research institute, described with assurance the progress Fields had made in its first year of operation. My memories otherwise seem to be confined to colleagues from my own university. University of Toronto Mathematics Chair, Steve Halperin, outlined with admirable clarity his ambitions for the Department of Mathematics, for mathematics, and for the Fields Institute.

But it was the words of Rob Prichard, then in his third year as President of the University of Toronto, that are most indelibly imprinted on my mind. He spoke with a passion that seemed to transfix everyone present—of the fundamental importance of mathematics to the modern world, and in particular, to a country, a province and a university. He included words to the effect that as the University leader, he would personally be very honoured to host the Fields Institute, and that he would do anything he could to make it a centre of which the affiliated universities and the entire province could be proud.

I believe that he also added, with endearing modesty, that he had wanted to study mathematics as an undergraduate, and had much enjoyed first-year calculus, but that he had met his Waterloo in the calculus of several variables. Well, it could be argued that multivariable calculus is the most difficult course

in the undergraduate mathematics curriculum, despite the fact that it is presented in second year.

The Fields Institute moved to Toronto in 1995, but it still belongs to everyone. It has since flourished, thanks to the efforts and talents of many people. The same is true of the CRM. In fact, Canada now supports four mathematical institutes, including the more recently created Pacific Institute for the Mathematical Sciences (PIMS) and Banff International Research Station (BIRS). They all have important roles in the mathematical life of Canada.