

# CHALLENGES AND OPPORTUNITIES FOR GRADUATE SCHOOL BOUND LIBERAL ARTS STUDENTS

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Though exceptional students from liberal arts colleges are no less qualified than they were in the past, over the last 10-15 years they have had increasing difficulty being admitted to top graduate programs in pure mathematics. We want to describe some of the challenges facing our students, and the benefits from a liberal arts training, concentrating on the following three questions.

- What can liberal arts colleges do to make our students more competitive?
- What can the AMS do?
- What can graduate programs do?

Consider the example raised by Malcolm Gladwell in his popular book *Outliers*, which does a great job illustrating our situation. In the first chapter, the author investigates the claim that date of birth is strongly linked to success in some sports. In Canadian youth hockey leagues, for instance, “the eligibility cutoff for age-class hockey programs is January 1st.” From a young age, the best players are given special attention. But think about it: at the ages of six, seven, and eight, the best players (for the most part) are also the oldest. So, the players who just make the cutoff – those born in January and February, can compete against younger players in the same age division, distinguish themselves, and then enter into a self-fulfilling cycle of advantages. They get better training, stronger competition, even more state-of-the-art equipment. Consequently, these older players get better at a faster rate, leading to more and more success down the road.

On page 23, Gladwell substitutes the birthdays for the players names: It no longer sounds like the championship of Canadian junior hockey. It now sounds like a strange sporting ritual for teenage boys born under the astrological signs Capricorn, Aquarius, and Pisces. March 11 starts around one side of the Tigers’ net, leaving the puck for his teammate January 4, who passes it to January 22, who flips it back to March 12, who shoots point-blank at the Tigers’ goalie, April 27. April 27 blocks the shot, but it’s rebounded by Vancouver’s March 6. He shoots! Medicine Hat defensemen February 9 and February 14 dive to block the puck while January 10 looks on helplessly. March 6 scores!

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