

Another reason to attend the conferences, albeit a less important one, is that they are entertaining. At what mathematics conference could one hear a presentation by Bishop Arnold Snyder of the First Church of Blackjack? Or a mathematical talk by Peter A. Griffin done entirely in his best Dr. Strangelove imitation?

My field is applied probability, a branch of mathematics. One of the applications that has most interested me over the years has been gambling. When probability was first studied in the 17th and early 18th centuries by Fermat, Pascal, Huygens, Montmort, Bernoulli, and De Moivre, gambling was its principal application, with application to actuarial science still in its infancy. Today, gambling plays a less central role in applied probability. The result is that there are few mathematicians working exclusively in this area. There are some, like me, who contribute occasionally.

As one might expect, there are also few, if any, mathematics conferences devoted to gambling. Nevertheless, there is a triennial interdisciplinary conference that always has a number of sessions concerned with mathematical topics. I am referring to the International Conferences on Gambling and Risk Taking organized by Bill Eadington and the Institute for the Study of Gambling and Commercial Gaming at the University of Nevada, Reno. I have attended nine of the last ten such conferences and have co-edited one of its proceedings volumes, *Optimal Play*.

Why have I kept coming back to these conferences after more than 25 years? There are several good reasons. One is that they bring together people that one might not otherwise meet. In my case, I met Edward O. Thorp, author of *Beat the Dealer*, at the 5th conference (1981); J. Laurie Snell (1925--2011), who solved the game of baccarat chemin de fer, at the 6th conference (1984);

Thomas Cover (1938--2012), well known for his universal portfolio, at the 7th conference (1987); Jerome H. Klotz (1934--2006), a former statistics professor of mine, at the 9th conference (1994); Robert C. Hannum, coauthor of *Practical Casino Math*, at the 10th conference (1997); and James Grosjean, author of *Beyond Counting*, at the 12th conference (2003), just to name a few of the mathematically inclined attendees.

At all of the more recent conferences, there has been a reception for authors promoting their recently published books. It was at such a reception at the 12th conference (2003) that I resolved that a book on probability and gambling at the level of Richard A. Epstein's classic *The Theory of Gambling and Statistical Logic* needed to be written for the present generation. I was confident that a 400-page book could be ready in three years, in time for the next conference. Seven years later, my monograph/textbook *The Doctrine of Chances: Probabilistic Aspects of Gambling*, at over 800 pages, was published. The book was an attempt to document the state of the art of the subject as of 2010, restricted only by the constraint that it be presentable at the undergraduate level (i.e., that it not be too technical).

At the 5th conference in 1981, I met Peter A. Griffin (1937--1998) and at the 6th in 1984, I met Russell T. Barnhart (1926--2003). I kept in touch with Griffin, author of *The Theory of Blackjack*, and Barnhart, one of the few historians in the world whose focus was the history of gambling, until their deaths, and I dedicated my book to their memories as a way of acknowledging the major influence they had on it.

Another reason to attend the conferences is to learn of new research. Many of the papers presented at the conferences, and particularly many of the ones published in

the proceedings volumes *Finding the Edge: Mathematical Analysis of Casino Games* and *Optimal Play: Mathematical Studies of Games and Gambling*, both co-edited by Bill Eadington, were cited in my book. These include 10 articles in *Finding the Edge*, perhaps the most influential of which (for me) was Donald E. Catlin's "Using overall expected return per dollar risked to determine strategy decisions in gambling games," and 16 articles in *Optimal Play*, perhaps the most important of which (for my book) was Chris and Tom Ferguson's "The endgame in poker," a game-theoretic study of poker. In particular, nearly half of the articles in these two volumes were deemed significant enough to be cited in a basic textbook on the subject.

The more important point is that new mathematical research is being done on the topic of gambling, and the subject is evolving. I can also acknowledge that, at least a few times, when the call for papers arrived from Bill Eadington, I started thinking about what I could speak on and went on to write a research paper that might not have been written were it not for that motivation. My work on Oscar's system ("Analysis of a gambling system" in *Finding the Edge*) is an example of that.

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Finally, in the volume *Optimal Play*, one of the papers, Richard A. Epstein's "Parrondo's principle: An overview," first introduced me to this intriguing topic, which has been the focus of my research for the past four years. In summary, I can say categorically that Bill Eadington's International Conferences on Gambling and Risk Taking have played an important role in my own career and, more importantly, in the continued development of mathematical research on gambling. Of course, my field is only one of numerous subject areas addressed by the conferences, so one can only speculate on the number of gambling scholars who owe a debt of gratitude to Bill Eadington for his foresight in initiating this conference series in 1974 and his career-long efforts on its behalf.

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