

Reading the Classics

It was purely out of an impulse that on a cold icy evening a few years ago, I walked into a magnificent bookstore on Purdue campus, *the Von's*, and asked the manager if he had any collections of classic short stories. The manager led me into a surreal underground archive, and showed me a massive collection of what looked like forgotten classics. I picked up a book of 71 short stories and over the next one month or so, read one story each evening. They were Steinbeck, Maugham, Huxley, O. Henry, Chekov, Aym e, Hemingway, Tagore, Conan Doyle, and the like. I probably read only about half of that collection. I liked some more than the others; but, nearly every time, after I finished reading a story, I just sat there, an undefinable feeling of fulfillment reigning over my emotions.

Independently, sometime later I read Brad Efron's 1998 article *R. A. Fisher in the 21st Century*. His article prompted me to take Fisher's 1970 book out of the library. I then gradually reread portions of the dusty books, *the classics*, that we read as students at the ISI in Calcutta. It had been long since I opened some of those books lying in unloved nooks of my bookcase. As I started rereading them, it was clear to me that they said things in a way that we can rarely match nowadays. They really knew how to provide the perspective, to excite a reader about the subject, and to light up the entire room, rather than a corner. That's why they are our classics.

I did some enquiring among students. Sadly, our PhD students are not told to read those timeless classics. They do not have the time. But, if only they would just care enough, and find the time, I believe that they will discover many gold mines of ideas, explanations, original techniques, and even open problems, good ones. The late senator Daniel Moynihan said that everyone is entitled to his own opinion, but not his own facts. It is just an opinion, and I hope not an overly elitist or an impractical one, that we should offer year long courses on classics that PhD students can choose from, and take as credit courses. Departments could have several such classics courses, to be periodically coordinated by willing faculty members. A student could take as many of them as she wishes.

Inevitably, the question then arises *what are our classics*. It's such a subjective choice. I am evidently no one to define for the others what our classics

are. I did some asking around in and outside my university. I applied the arbitrary cutoff of 1985, rationalizing that it takes 25 years for a text to become a recognized classic. On a purely personal basis, if I was made the emperor of a statistics department (and given ample immunity from prosecution), I would have my department run four classics reading courses as part of a two year sequence. PhD students would be asked to take at least two of these four courses in their third and fourth year. I (the emperor) would define my four classics courses as overviews of instructor chosen portions of the books of the following kind.

Classics-I. Feller, Volume 1; Jeffreys (1948); Cramér (1946); Cox and Miller (1965).

Classics-II; Neyman (1952); Fisher (1970); and two of Blackwell and Girschick (1954), Scheffé (1959), Cochran (1977; Sampling Techniques), and Cox (1958; Planning of Experiments).

Classics-III. Feller, Volume 2; Grenander and Rosenblatt (1957); and one of Loeve, Volume 1, Chung (1974), and Williams (Volume 1, 1979; Markov Processes and Martingales).

Classics-IV. Lehmann (TSH, 1959); Rao (1973); and two of Anderson (1958; Multivariate Analysis), Bickel and Doksum (1977), and Berger (1985).

I certainly expect that others will have their own choices for the classics. After all, who would disagree that the Kendall-Stuart volumes and Lehmann's estimation book are classics? Or, Kolmogorov (1933), Doob (1953), Gumbel (1958), Cramér and Leadbetter (1967), Ferguson (1973), Petrov (1975), Karlin and Taylor (1975), Tukey (1977), David (1980), Hall and Heyde (1980), Serfling (1980)? But, as long as my classics sequence gets going, I will have that undefinable pleasure of giving my student an enlightened and challenging education, one that she would deserve, and no less. The subject of probability and statistics was truly growing around the years that many of these classics were written. Anderson, Blackwell, Cochran, Cox, Cramér, Feller, Fisher, Kiefer, Kolmogorov, Lehmann, Neyman, Pitman, Rao, Scheffé, Wald, all of them were literally creating the subject, brick by brick, inch by inch, and putting down their thoughts for history. Then the other classics followed. What better way can our students get a sweeping glimpse and feel of that mighty canvass than to get it directly from the masters?