

The Webscout

The history of statistics

When did mankind start using statistics and for what purposes? The history of statistics includes names like Bernoulli, Laplace, Gauss, Bayes, and Pearson. I guess you will have heard of some or all of these famous people, whose theories still play an important role in our daily business. Think of Pearson's coefficient or the Gaussian distribution. Wikipedia gives you a comprehensive overview of the development of modern statistics and its main contributors: http://en.wikipedia.org/wiki/History_of_statistics.

If you want to find more details, including important milestones by era, you can access <http://www.economics.soton.ac.uk/staff/aldrich/figures.htm>. According to this website, the origins of statistics lie in the period 1650 to 1700. For each subsequent period the website not only gives you the key events, but also a paragraph on the contributors, with details on their professional background, work, and achievements. For example, you can learn that the man behind Student's t-test was actually named William Sealy Gosset, but called himself

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“Student”. He was a chemist who worked for the Dublin brewery Guinness. The Website further provides you with a huge number of links to other resources.

An appealing timeline of statistics is given by the American Statistical Association at <http://www.statslife.org.uk/history-of-stats-science/1190-the-timeline-of-statistics>. It explains that Gosset developed his t-test to ensure that every brew tastes equally good. The timeline goes far beyond the modern history of statistics. Indeed, statistics in some form was already being used in ancient times. The first event in the above-mentioned timeline is dated 450 BC, when Hippias of Elis used average values to estimate the date of the first Olympic Games.

Another way to look at the history of statistics is to review the history of a specific

theory. Sharon Bertsch McGrayne, who has a professional background as a newspaper reporter and freelance scientific writer, does this in her popular book “The Theory That Would Not Die”, which summarises the history of Bayes’ theorem. The book’s subtitle is “How Bayes’ Rule Cracked the Enigma Code, Hunted Down Russian Submarines, and Emerged Triumphant from Two Centuries of Controversy”. You can find great stories inside, like the one about a lost submarine that even inspired a famous Hollywood movie, “The Hunt for Red October”. Bayes’ theory, although an established standard approach nowadays, was once controversial. McGrayne’s book establishes a link between statistical theories and the influence they can have on world history, society, and medicine. A summary of the book is given at http://lesswrong.com/lw/774/a_history_of_bayes_theorem/. Alternatively, you can listen to the author herself speaking about the book at Talks at Google: <https://www.youtube.com/watch?v=8oD6eBkjF9o>.

A further example of the influence of statistics is the story of Florence Nightingale. She is often referred to as the founder of modern nursing. She was also a pioneer in statistical illustrations and statistics in health policy. She developed a polar area diagram, the so-called Coxcomb, to illustrate her statistical results on sanitary conditions in military hospitals for Queen Victoria. Her work led to health reforms in the United Kingdom. Nightingale became the first female member of the Royal Statistical Society and later of the American Statistical Association. Her life and work are summarised at <http://blogs.sas.com/content/jmp/2013/02/04/celebrating-statisticians-florence-nightingale/> and http://en.wikipedia.org/wiki/Florence_Nightingale.

To close this Webscout, this link gives a nice summary of the history of statistics: https://www.youtube.com/watch?v=DeX5CQJ_S40.

Did you like this Webscout article? Do you have any questions or suggestions? Please feel free to get in touch and share your thoughts.

