THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Thursday 5th October 2000 7:15 for 7:45

Hopkinson Room,
University of Cambridge Computer Laboratory,
Pembroke Street, Cambridge

Sympercents: A Simplified Presentation of Natural Log Transformed Data

Tim Cole

Institute of Child Health, London

Abstract: The results of analyses on log transformed data are usually back-transformed and interpreted on the original scale. Yet if natural logs are used this is not necessary - the log scale can be interpreted as it stands. A difference of natural logs corresponds to a fractional difference on the original scale. The agreement is exact if the fractional difference is based on the logarithmic mean. The transform $y = 100 \log_e x$ leads to differences, standard deviations and regression coefficients of y that are equivalent to symmetric percentage differences, standard deviations and regression coefficients of x. Several simple clinical examples show that the $100 \log_e$ scale is the natural scale on which to express percentage differences. The term sympercent or s% is proposed for them. Sympercents should improve the presentation of log transformed data and lead to a wider understanding of the natural log transformation.

Speaker: Tim started out as an engineer, taking the Mechanical Sciences tripos at Cambridge. He then spent two years in Oxford and became a Bachelor of Philosophy in Statistics (a rare qualification - there are only 5 extant as the BPhil soon changed to MPhil). In 1970 he joined the MRC Pneumoconiosis Unit in South Wales, where he spent 5 happy years learning at the feet of Peter Oldham. He then moved to the MRC Dunn Nutrition Unit in Cambridge, remaining there until its major reorganisation in 1998. Still MRC funded he moved to the Institute of Child Health in London, where he now has a personal chair in medical statistics.

Annual General Meeting: Tim's talk will be preceded by a brief Annual General Meeting.

Directions: Enter the New Museums site through the arch from Pembroke Street. Turn to the left in front of the building with the brown iron staircase and pass through the passage way by the tree. Enter the lobby which is straight in front of you and find the back entrance to the Computing Service on your left. When inside follow the signs. It is not possible to park on the New Museums site in the evening. The back entrance to the Computing Service will be locked at 7:45.

Next Meetings:
30th November – David Clayton (MRC Biostatistics) on 'Approaches to the analysis of longitudinal studies with dropout: cognitive function and aging'.
8th February 2001 – Graham Healey (Huntingdon Life Sciences).

Supper: Some members eat regularly in the University Centre before each meeting at 6-15. Feel free to join them.
Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 2EF; telephone 01223 355294 Extension 380; E-mail `peter.watson@mrc-cbu.cam.ac.uk`
TURN OVER for the Annual General Meeting agenda

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Annual General Meeting

The annual general meeting will be followed immediately by Tim Cole's talk ' Sympercents: A Simplified Presentation of Natural Log Transformed Data '.

Agenda:

0.   Approval of Minutes of previous A.G.M.

1.   Treasurer's Report.

2.   Secretary's Report.

3.   Election of Chairman, Secretary, Treasurer, plus 3 other members of the Committee.

4.   Any Other Business.

Rules for Election:

1.   FRANCISE: All paid-up members may vote or stand for office.

2.   NOMINATIONS: The offices to be filled are Chairman, Secretary and Treasurer and three other members of the Committee.

An outgoing Chairman will be a member of the Committee ex officio. At the end of each year the entire Committee will stand down, but may stand again for the same office as they are leaving without nomination. To be elected to a different office a candidate must be nominated by one person from the paid-up membership, not including himself. Nominations do not require a seconder to be valid, but do require the consent of the nominee. One person can be nominated for more than one office, but hold only one. If a person is elected to a higher office (according to the ordering given below) he or she automatically ceases to be a candidate for a lower office. A candidate for the post of Chairman, Secretary, Treasurer is automatically a candidate for the Committee if he or she fails to gain election to one of these three posts.

TURN OVER for the directions to the Hopkinson Room and the abstract of Tim's talk