

The status of stats

STATISTICS are a vital part of the heart of scientific psychology, but they never really turned me on until I needed them. On a purely personal basis, I was sometimes intrigued by the mathematical arguments, but more often turned off by the abstract ideas. What excites a mathematical statistician is not what easily rouses a lad of the world. It's a bit like learning the tables of chemical compounds, or the distance of the nearest star, when it was more useful to know the tables of train times, or the distance of the nearest pub.

When you do need them, in order to weigh evidence for one side of an argument – 'Are there more industrial accidents on night shift?', for example – stats are only a small part of complex thoughts around research design. There are fewer office workers at work on safe jobs at night; there are fewer medical stations open, so there may be a reporting error; people who choose to work on night shift are self-selected (and often more medically checked) to be highly fit and hardy, compared with the soft day workers. And if fewer accidents are then found in some studies on night shift, perhaps these are due to different causes, like bad judgement. A simple question looking for a simple statistical answer disappears into the confusion of the real world.

Suppose you do find some regular statistical phenomenon, such as a peak in Signals Passed at Danger after three hours of work, higher than after 12 or 13, then our curiosity, as well as our public concern, demands an answer to the question why. What is going on in the railway engine, or the mind of the engine driver, or in his or her ambient physiology, or the surrounding environment, that can possibly explain it? Since the pattern was noted some 15 years ago, a fair bunch of mighty minds have attacked the problem. I do not know the answer, if they have found one. I do know that many people happily assume that there are bound to be more accidents after longer hours of work.

It reminds me of the early space flight shiftwork simulations, when the teams were told that their performance would hit a trough at 3am, and so the highly selected fit, intelligent and enthusiastic wannabe astronauts worked together to eliminate the

trough. The human mind is a powerful engine, although prone to arrogance at times. Please don't try beating sleepiness that hits you while you are driving a car: get somewhere safe and give in. It has been estimated that as many as 20 per cent of

Praying for statistical evidence

vehicle accidents are due to driver sleep. And there are many more drivers who were lucky to doze onto a gentle grass verge or to be jolted awake by a rumble strip. Remember the bumper sticker: 'I want to die peacefully in my sleep like my grandfather, not screaming and yelling like the passengers in his car'.

So we do need stats and careful studies that use them, as well as good observation skills and logical thinking. Be grateful that you live in the SPSS-PC age, when you can set off a factor analysis with a few clicks of your mouse, and get the answer in seconds. Once, I am told, it took a room full of calculator operators, like a big orchestra. But there's not much point in doing it if you don't know what it means, and how to interpret and present the results.

Getting the hang of stats is much easier with expert guidance and vivid examples, so read this issue with alert attention. You may need your statistical understanding to publish and progress in your career, but it does you no harm at all in your everyday life either.

This need to evaluate everyday evidence statistically was clear in the BBC's recent *Everyman* documentary, investigating the power of prayer on heart patients. A whole hour of television failed to tell the viewer whether it had any significant results

(although see news.bbc.co.uk/1/hi/health/3193902.stm). There were endless pictures of heart operations, and of infinite varieties of prayer groups, swirling images, moody music, and references to a control centre for the double-blind allocation of patients to prayer or not, but no statistical results. There have previously been studies with statistically significant results both ways, so the issue is non-trivial. Do they think the viewing public will not understand? If we can understand about heart operations and prayer groups, surely most people will be able to understand if it works or not? Mind you, the fall-back position for one prayer lady was that it might just help you to die better. Statistics can't help if there isn't a clear question.

Zander Wedderburn

Contact Zander Wedderburn via the Society's Leicester office or e-mail: president@bps.org.uk.

Press Committee

Media Training Days 2004

Monday 16 February 2004

Monday 24 May 2004

Monday 27 September 2004

Monday 29 November 2004

All Media Training Days will be held at the Society's London office at 33 John Street.

The days will include:

- news writing
- snapshots of the media
- media releases
- interview techniques

For a registration form and further details contact:

Dawn Schubert
The British Psychological Society
St Andrews House
48 Princess Road East
Leicester LE1 7DR
Tel: 0116 252 9581

SCIENCE LIVE IN SCOTLAND

THE BA's web-based database of science presenters (funded by Planet Science and Science Worlds) has been adapted to allow schools and community groups in Scotland to book science shows and workshops from science presenters working in, or willing to travel to, Scotland. All presenters who may already have registered, but for regions of England only, are now invited to re-register giving details of their shows/audiences and how they fit with the Scottish educational scene. Those who work only in Scotland now have their chance to promote themselves.

□ Full details at www.sciencelive.net.

A SIGNIFICANT DEVELOPMENT

EARLY next year the Royal Statistical Society will be launching *Significance*, a quarterly magazine for anyone interested in statistics and the analysis and interpretation of data. Its stated aim is to communicate in an entertaining and thought-provoking way the practical use of statistics and to show how statistics benefit society.

NEW PSYCHOLOGY AND CULTURE CENTRE

THE UK's first-ever Centre for Psychology and Culture was opened at the University of Luton in October. It is intended to bring together various developments in teaching and research in cultural psychology that have taken place recent years. The Centre will also provide the opportunity to study for a PhD and to conduct research that addresses the role of culture in psychological functioning.

PREVENTING ABUSE

POPAN, the Prevention of Professional Abuse Network, is launching a new service for people concerned about abuse by health and social care staff. With a grant from the Department of Health, POPAN is developing its service for friends, family and professionals concerned that abuse may be happening. A confidential helpline (0845 450 0300) will allow callers to talk through their options.

□ See www.popan.org.uk.

Parliamentary update

NOVEMBER was an important month for psychology in parliament, with the Queen's Speech (see www.parliament.uk) expected to announce crucial revisions of mental health and incapacity legislation. A briefing on mental health issues, drafted by a Society-sponsored Fellow at the Parliamentary Office of Science and Technology (POST) and sent to all MPs, summarises current thinking and signals that a Queen's Speech inclusion is likely.

The POSTnote by Nicola Cogan (Glasgow Caledonian University) aims to provide legislators with an overview on existing mental health legislation, the drivers for change following the 1998 review by the Richardson Committee, and some of the alternative paths to follow regarding future mental health policy. The document discusses the role of the new Mental Health Tribunal, the importance of advocacy, and the need to place mental health legislation in the context of modern human rights law, ensuring new safeguards for the provision of care (compulsory treatment only to be carried out when the decision-making process is impaired). References to other relevant legislation, such as the Disability Discrimination Act 1995, are also included as part of a wider analysis on mental health. See www.parliament.uk/post/pn204.pdf for the full paper.

Peter Kinderman, Chair of the Society's working group on Mental Health Act reform, said: 'We now confidently expect the government to announce mental health legislation in November's Queen's Speech. The POSTnote gives a good overview of the strengths and weaknesses in the proposed Mental Health Bill. The BPS

continues to negotiate with government in this important area – over the very important changes in the professional lives of psychologists following implementation of this legislation, and lobbying for further amendments. As the POSTnote indicates, the BPS continues to argue that any person subject to the legislation must be significantly impaired in their ability to make decisions about the provision of health care.'

Mark Ramm, leading respondent for the Scottish Branch of the Society on mental health reform, said: 'Scotland already has new legislation in relation to "incapacity" and "mental health" that is very similar to the legislation being proposed for England and Wales. However, there are some significant differences in the general emphases and in some of the details. The Scottish legislation is explicitly client/patient oriented, and both Acts include a set of general principles which set out the intended spirit of the law. Many are now requesting that Westminster should also adopt this approach. Although the increasing importance of psychology is acknowledged in the Scottish Mental Health Act by the inclusion of the term "psychological intervention", the role of psychologists

remains undefined in all the Scottish legislation. A current priority for psychologists in Scotland is therefore to influence the various guidance documents that will inform those implementing the legislation as to what they should do in practice. I suspect that regardless of what finally appears in the primary legislation at Westminster, this task of defining when and how psychologists should actually be used will be a common priority both north and south of the border.'

Mental health – black and ethnic consultation

Last October the Department of Health launched a new consultation paper on how best to improve mental health services for black and ethnic minority communities. See www.doh.gov.uk/deliveringraceequality/index.htm for copies of the consultation document, and for details of the Society's response coordination see www.bps.org.uk/about/pab_papers2.cfm?paperID=126. Closing date is 23 January 2004.

Incapacity Committee submissions

The Society's Working Group on the draft Mental Incapacity Bill, as well as a delegation from the Society's Scottish Branch, presented their written evidence to the Joint Committee on the bill at the end of August. Both groups were invited to follow this up with oral evidence sessions to the committee in Westminster. Copies of all submissions can be found via www.publications.parliament.uk/pa/jt/jtdmi.htm.

Visit to ICN

The Society invited the Parliamentary and Scientific Committee (of which it is a member) to visit the Institute of Cognitive Neuroscience (ICN)

and associated research facilities on 6 November. This visit was part of a wider range of activities designed to bring psychological expertise to policy makers.

Gender Recognition Bill

The Society has been advising the Department of Constitutional

Affairs on the draft Gender Recognition Bill, published in July, because it specifically mentions Chartered Psychologists as eligible to be part of the Gender Recognition Panels (for assessment). See www.lcd.gov.uk/constitution/transsex/genderbill.pdf for the draft bill, which has also been

reviewed by the Joint Committee on Human Rights (see www.parliament.uk/parliamentary_committees/joint_committee_on_human_rights.cfm).

□ For further details on any of these items, please contact Dr Ana Padilla (Parliamentary Officer) on anapad@bps.org.uk.

Sex inequalities in academia

OVER 2000 university scientists and engineers have revealed the differences between men's and women's academic careers, in a new report from the Athena Survey of Science Engineering and Technology in Higher Education.

ROY PETERS (REPORTDIGITAL.CO.UK)

The survey, which ran in 23 universities this spring, found that

- women's and men's membership of professional societies was similar; however, 76 per cent of the relevant women were ordinary members (62 per cent of the men); and 19 per cent of the relevant women were fellows (34 per cent of the men);
- while it was widely recognised that being a conference keynote speaker was an important contributor to career progression, 21 per cent of male lecturers had been keynote speakers at a national or international conference in the last three years, and only 15 per cent

of women;

- 30 per cent of women who took a career break experienced difficulties returning to work;
- 78 per cent of men (and only 68 per cent of women) achieved senior lecturer or reader posts through promotion rather than through competitive application; and
- all-male panels had appointed 37 per cent of the respondents.

The biggest difference between men's and women's perceptions of disadvantage related to salary: 10 per cent of men thought women were paid less than men, while 39 per cent of

women identified it as an area where they were disadvantaged.

Caroline Fox, Athena Programme Manager, said: 'This survey offers us for the first time authoritative insights into the real experiences of scientists across the UK.

It begins to flesh out the reality behind the broad statistics and anecdotal evidence, and helps to give a better focus to work designed to improve careers in science, engineering and technology for both women and men.'

The Athena Project aims to promote the advancement of women in science engineering and technology in higher

education and a significant increase in the number of women recruited to the top posts. Its current work is funded by the DTI's Office of Science and Technology.

□ For the preliminary report, see www.etechnology.co.uk/athena.

BORROW BOOKS FROM ANYWHERE

THE Society of College, National and University Libraries (SCONUL) has introduced an innovative scheme – SCONUL Research Extra – allowing access to libraries throughout the UK for academic staff and postgraduate research students. If your own institution is part of the scheme, you can register to borrow books from any other participating library. With 141 institutions signed up, SCONUL Research Extra is the largest borrowing scheme for higher education researchers in the UK.

□ For full details and to register, go to www.sconul.ac.uk/use_lib/srx/

Healing handout

THE Healing Foundation is to support a major research project to identify the factors that contribute to successful psychological adjustment in people with disfiguring conditions.

The national charity funds research into pioneering surgical and psychological healing techniques. The proposed multi-centre project will span three years, and applicants are likely to have a successful track record of high-quality research.

□ For further information and an application pack contact the Healing Foundation at the Royal College of Surgeons of

England, 35–43 Lincoln's Inn Fields, London WC2A 3PE. Tel: 020 7869 6920; e-mail: info@thehealingfoundation.org. Closing date for applications is 14 March 2004.

WEBSITES

www.vso.org.uk/publications/orbit/87/index.htm

Voluntary Service Overseas publication – Mental health special
If you come across a website that you think would be of interest to our readers, let us know on psychologist@bps.org.uk.