Computerised stethoscope helps doctors diagnose heart defects

GP's have a new diagnostic tool at their finger-tips: a computerised stethoscope which analyses heartbeats on a standard PC. The stethoscope designed and built by the University's Heart Sound Group, can be used by GPs in their surgeries to pick up possible heart defects. Patient trials of the device were started this summer. Over 50 cardiac patients at the Royal Sussex County Hospital have volunteered so far to take part.

The stethoscope works by listening to the heartbeats and digitising the sound. The digital data is recorded on computer disk where it is analysed to extract key features. Doctors can examine the screen to spot changes in rhythm which they might not have picked up with an ordinary stethoscope. Each recording is stored so that it can be compared with others made at a later date, revealing whether the condition of the heart has changed.

"The problem with conventional stethoscopes is that they provide very subjective information," says Dr John Torry, head of the Heart Sound Group. "Doctors' impressions of what they are hearing are far less reliable than a quantified digital reading. Most importantly, a computerised stethoscope enables a non-subjective record to be kept of past investigations. Building up a long-term record of the state of the heart makes diagnosing problems easier."

Echocardiograms, machines which bounce ultrasound off the beating heart to produce an on-screen 3D computer image, also help predict heart defects. But their cost of £100,000 puts them out of reach of most general practices. The computerised stethoscope cannot replace the echocardiogram, but at a cost of £2000, it is a cheap and useful tool for GPs.

Two doctoral students, Ed Hebden and Ali Haghighi-Mood, are currently assisting Dr Torry in building up a database of patients' heartbeats. "Classification is the starting-point for diagnosis," said Dr Torry. "The data which we are compiling from hundreds of patients will give GPs a clear idea of what to look for when faced with a possible heart defect."

Celebrating the Nobel Prize

Two Nobel Laureates share a moment of glory. Professor Sir John Cornforth and Professor Sir Harry Kroto are pictured at a party held by the School of Chemistry, Physics and Environmental Science to celebrate the award to Sir Harry of the Nobel Prize for Chemistry. Sir John, also a member of the School, was awarded the same prize in 1975.

In particular, the team is trying to identify what kind of trace is typical of sufferers from aortic stenosis, a hardening of one of the valves in the heart. In a year's time they hope to offer GPs software which will recognise the problem in a new patient's trace and assess how far the condition has developed.

□ This week, at 'Mednet 96' at the Brighton Centre, the team are discussing how heart sound data can be made available to a wider audience using the Internet. Researchers across Europe will be able to examine their material, offering useful medical feedback via the Internet.
Science Teachers’ Open Day

Early in the vacation, 55 science and mathematics teachers from 25 schools and colleges attended an Open Day at the University as part of our Science Liaison programme.

After a short welcoming address by the Vice-Chancellor, teachers participated in a number of short talks and demonstrations of research in the Science Schools and were later able to mingle with faculty. Feedback has been very positive. Not only did the teachers find the day interesting, enjoyable and well organised, but for most it enhanced their appreciation of science courses at Sussex. Another Open Day for teachers is planned for next year.

Other on-going plans within the Science Liaison programme over the next few years are aimed at raising the profile of science at Sussex and attracting many more quality applicants to the University.

Mike Tribe
Science Liaison Director

Letters and People

Nursery Open Day

Nursery Supervisor, Rosie Jones, writes:

The Nursery was filled with teenagers for a change when it celebrated its 30th anniversary with an Open Day in July. They had all been here as three and four year olds and revisiting awakened many a funny or embarrassing moment for them especially when they saw themselves in old photographs. They all commented on how small everything seems now, and equipment such as the ‘fire-house’, climbing-frame, tunnels and playhouse were recalled by almost everyone.

Children who attend the Nursery now also came to visit, some staying for almost the whole day. All the current staff were there, as well as two of the three previous supervisors, and for all of them it was lovely to see how the children they had known as toddlers had blossomed in the intervening years.

We send our very best wishes to those former nursery children who were unable to come to the celebrations. We are hoping to compile a book of memories. If any past parents and children would like to send drawings, photographs or recollections in to the Nursery we would be grateful for contributions.

New Faces

Mark Broom, Maths Lecturer

New recruit to SMS, Dr Mark Broom, has managed to take the birds out of bird watching. As a statistician he has a healthy interest in Game-Theory, in particular mathematical models of bird behaviour. Mark comes to Sussex having spent a year lecturing in Glasgow. As a Statistics and Probability Lecturer his advice to all lottery participants is “forget about it and put your money on the horses. The odds aren’t great either, but they’re better than the lottery.” Mark also turns out to be a bit of a mean chess player: “My best success is when I won an open tournament where there were titled players competing”. Besides other things Mark is “quite keen on real ale. Although it doesn’t help your chess if you do a lot of drinking with it, beer afterwards is essential.”

REUNITED ... and it feels so good

Readers old enough to remember the 1960s will recall the many newspaper pictures at the time of the Jay twins, Sussex students and daughters of the then Labour Cabinet Minister Douglas Jay. Most memorably perhaps sliding down the Library steps in their Courrêges boots and mini-skirts. Thirty years on, the twins Helen Pennant-Rea (right) and Catherine Boyd were among more than 200 alumni who returned to campus for their Class Reunion. The entrants from the years 1963 and 1964 (among the first to study at Sussex) broke the attendance record for reunions organised by the Alumni Office, and campus was buzzing with excitement. One of the highlights was a discussion led by founding fathers Professor David Daiches, Lord Asa Briggs and Professor Roger Blin-Stoyle on The Idea of a New University Revisited. This proved to be a lively debate as to whether they believed their ideals held in the early days of the University had been achieved.

Dinner in the evening was followed by a 60s disco which had everyone grooving the night away before returning the following morning to say farewell, swap addresses and have a final look at the memorabilia displays. As the Class of 63/64 drifted away they all agreed with one member who said “…what could have been a disappointing occasion proved to be such a warm experience… I felt really sad when I got home!” So enjoyable was the occasion that another reunion is planned for September 2001.
Last term the Printing Unit sent out a questionnaire about the reprographic services offered by the Sussex House and Arts Machine Rooms. An inducement for people to return their forms was entrance to a free draw and the response was excellent. The lucky winners Kristian Berggreen in the Bookshop and John Sander of the Student Employment Office will each receive a £25 book token.

Keith Allfrey and Barbara Pettett of the Printing Unit are pictured drawing the winning tickets in front of the new Ryobi 512E two-colour printing press, a high specification machine, which according to Keith will assist the unit in meeting tight production deadlines.

Astronomical Success
The Royal Astronomical Society has entered its 1996-97 session with two of its three secretaries being graduates of the University of Sussex. Kathy Whaler gained a first class degree in mathematical physics and is now Professor of Geophysics at Edinburgh, while Margaret Penston, who is at the Royal Greenwich Observatory, Cambridge, has an MSc and a DPhil in Astronomy.

IN THE BOOKSHOP

Recent publications by Sussex authors, all obtainable from Sussex University Bookshop


New in paperback
DIMENSIONS OF CREATIVITY edited by Margaret Boden. MIT Press 11.95


CAMBRIDGE TRACKS IN MATHEMATICS NO.120. FUNCTION SPACES, ENTRPY NUMBERS AND DIFFERENTIAL OPERATORS. David E. Edmunds and Hans Triebel. Cambridge UP £40.

MENTAL MODELS IN COGNITIVE SCIENCE, ESSAYS IN HONOUR OF PHIL JOHNSON-LAIRD edited by Jane Oakhill, Alan Garnham. Psychology Press £34.95.


POWER AND POLITICS IN OLD REGIME FRANCE 1720-1745 by Peter Campbell. Routledge £40.


NOAH'S FLOOD. THE GENESIS STORY IN WESTERN THOUGHT by Norman Cohen. Yale UP £19.95.

TOUCH: AN ESSAY by Gabriel Josipovici. Yale UP. Cloth £19.95.


In brief

RESEARCH OPPORTUNITIES

For more information, call Mylene Powell in the Research Office, ext 3812 (mornings only), email: M.Powell@sussex.ac.uk.

ROYAL SOCIETY EXCHANGES WITH JAPAN, KOREA & SOUTH EAST ASIA: Awards for study visits in Japan, Korea & SE Asia and fellowships in Japan. Areas of interest: natural sciences, mathematics, engineering, non-clinical medical research and the scientific research aspects of psychology, archaeology, geography, agriculture and the history of science. Annual closing dates: 20 September, 6 December, 7 October.

ROYAL SOCIETY EXCHANGES WITH CENTRAL AND SOUTH AMERICA, INDIAN SUBCONTINENT, AFRICA & MIDDLE EAST: Awards for visits to and from the UK, for scientists of post-doctoral status in the natural sciences. ROYAL SOCIETY EUROPEAN SCIENCE EXCHANGE PROGRAMME: to promote the mobility of researchers within Europe. Study visits are normally between 10 days and 3 months (6 months may be considered).

Extension of Appointment of Vice-Chancellor

The Council of the University has established a Group to make recommendations concerning the extension of appointment of the Vice-Chancellor, Professor Gordon Conway. Professor Conway was appointed Vice-Chancellor for five years from 1 October 1992 and has now been in post for four years. The Group established to consult within the University will report to the Autumn meetings of Senate and Council. Membership of the Group: Chairman of Council Dr Brian Manley, Vice-Chairman of Council Sir John Chatfield, Treasurer Mr M.R. Toynbee, Other lay member of Council Ms J.M.F. Rutherford, Senior Pro-Vice-Chancellor Professor Margaret McGowan, Elected by Senate Professor William Lamont.

The Group has written to all members of staff of the University inviting the submission of written views, in confidence, which should be addressed to its Chairman, care of the Registrar. The final date by which views should reach the Group is Friday 1 November 1996.
What's on...
Monday 21 October - Sunday 27 October

Lectures, Seminars, Colloquia

- **Monday 21 October**
  12.30pm Sussex Continuing Education Research Forum: Adult Learners and Continuing Education at Kuwait University. Eissa Al-Ansari, Room D310.
  2pm Cullum Lecture: Between Modes of Understanding: Psychoanalytic narratives and other stories. Eva Hoffman, Gardner Centre Theatre.
  4.30pm Neuroscience Seminar: From Living Eyes to Seeing Machines. Claire Rind (Newcastle-upon-Tyne), Biology Lecture Room.
  5pm Sociology & Social Psychology Seminar: Meta-analysis of the determinants of heterosexual condom use. Paschal Sheenan (Dept. of Psych. Sheffield), Room D310.
  5pm CPES Colloquium: The 3 Ps (An Industrial Approach to Polymer Research). Dr W.A. McDonald (ICI Wilton), MSLT.

- **Tuesday 22 October**
  3pm SEI Research in Progress Seminar: Aspects of Security: the NATO Enlargement Debate. Prof. Otto Pick (Charles University, Prague), Room A71.
  4pm CGOS Seminar: The unsuspected relationship between coffee cups and old elephants: The problem of representation in Artificial Intelligence. Robert French (University of Liege), Room PBSC11.
  4.15pm Biochemistry and Genetics & Development Seminar: How do integral membrane proteins end up in the right membrane? Some answers from one example. Dr. George Bunting (University of Bristol), Biology Lecture Room.
  5pm International Relations and Politics Research in Progress Seminar: Rebels, Sceptics and Faction: Euro-sceptical factions in Political Parties. Dr. Paul Taggart, Room D510.
  5pm German research Colloquium: Moses Mendelssohn and the Concept of a German-Jewish Symbiosis. Ralph Blumenan (London), Room A155.

- **Wednesday 23 October**
  1.30pm SSCOAP: Antibotogen. Dr. Mike Charlton (UCL), Room PB2A2.

- **Thursday 24 October**
  12.30pm Postgrad History and Gender Seminar: Minor Literature, Major Source material. Collective Biographies of Women, 1550-1900. Sybil Oldfield, Room D730.
  3.30pm IDS Gender Seminar: Gender and conflict: an overview of trends and issues. Judy el Bushra (ACORD), IDS.
  4pm Geography Research Seminar: The Russian Far East: Resource Frontier for the Pacific Century. Mike Bradshaw (Birmingham), Room D610.
  4pm Laboratory of Experimental Psychology: Cognition and narrative. Two experiments and the augmentation of a 2,300-year-old theory. Keith Oatley (Toronto), Biology Lecture Room.
  5pm University of Sussex Public Lecture: Martin Wight Memorial Lecture: On Writing International History: Maps, Chaps and Much More. Dr Zara Steiner (Cambridge), A1 Lecture Theatre.

Lectures, Seminars, Colloquia

- **Thursday 24 October cont...**
  5pm Social and Political Thought Seminar: Research Interests Colloquium. Room D630.

- **Friday 25 October**
  4pm Astronomy Centre Seminar: Power spectrum analysis of redshift surveys. H. Tadros, Room PB1A7.
  4.30pm Philosophy Society Meeting: The Concept of Landscape. Terry Diffey, Room A155.

The Gardner Arts Centre

- **The Fresh Dances Group**
  7.45pm Thursday 24 Oct: The Flamboyant and theatrical Matthew Hawkins and his Fresh Dances Group make a welcome return to the Gardner with a brand new double bill of stunning contemporary dance.
  The Gardner are offering two tickets for the price of one to see Matthew Hawkins and his Fresh Dances Group to the first twenty people who produce their copy of Bulletin at the box office.

Film at the Gardner

- **Monday 21 October**
  6.30pm Brief Encounter

- **Tuesday 22 October**
  9pm High Hopes

- **Wednesday 23 October**
  7.45pm Life in Sweet

- **Sunday 27 October**
  6pm Secrets and Lies (15)
  9pm ERMO (18)

CDU Workshops

- **Monday 21 October**
  5.30pm Inland Revenue: Training for and work in taxation with the Civil Service.

- **Tuesday 22 October**
  6pm The Bar: how to train and work as a barrister.

- **Wednesday 23 October**
  5.30pm Association of Commonwealth Universities: Postgraduate study in Commonwealth countries.

- **Thursday 24 October**
  11am The World Bank: Find out about their Young Professionals Program.
  6pm Institute of Chartered Accountants: Accountancy careers for students of any discipline.
  For more information or to sign up for a workshop go to the CDU, in Falmer House, with your £5 refundable

Announcements

- **Erasmus Teaching Exchange**
  Psychology of early cognition and language: Dr Alexandra Sansavini (University of Bologna) will present three lectures on 28 & 30 Oct. at 4pm in Room C207, and 29 Oct. 1.30pm in PB2A. All welcome.

- **Recital**
  1.15pm Recital by Michael Finnissy on Thursday 24 Oct. The Recital Room, Falmer House. Free and all welcome.

- **Senior Common Room**
  Membership of the Senior Common Room is open to all University staff. If you would like to join or receive more details contact Andrew Buxton in IDS (A.Buxton@sussex.ac.uk).

- **Call for Volunteers**
  10 - 15 Nov: Violence, Abuse and Women's Citizenship International Conference needs volunteers. Work for 3 days get 2 days free attendance, or work 2 days and get 1 day free attendance. Call 01274-383528.

IDS Library - BLDS

Issue desk service:
Term time: 11am - 4pm (open lunch time)
Vacation: 10am - 1pm and 2pm - 4pm
Borrowing allowances:
A maximum of 5 books at any one time for UoS postgraduates.
Journal issues will no longer be lent.

Language Centre

- **New Opening Hours**
  Mon - Thu: 9am - 8pm
  Fri: 9am - 5pm
  Sat: 12pm - 6pm
  Sun: Closed

Small Ads

KINGSTON FAMILY HOUSE TO LET: Furnished, detached, modern house with 4 bedrooms and south facing garden in popular village near Lewes. Good local schools. Avail. immediately, single occupancy. Tel: K. Nixon. 692005 (Wk) and 8536 (Lt) or 483900 (Hm).
SOFA: Green 3-seater sofa and two armchairs. Free! Call 582007.

CAR FOR SALE: Renault 11 Turbo 1400cc, 1987 D Reg, electric, w/d, central locking, remote control, 6 mths MOT, £1350 Contact Ali: ext. 2351, or 684202.

WINE: 1995 Domaine des Cantarreilles AOC, a gold medal-winning red from the Costieres de Nimes, £56 a case and from the same vineyard, a 1995 Viognier vins de pays d’Oc. Exc. Value at £68 per case. 01825 722945.

WANT TO STOP SMOKING? If you are thinking of quitting come to a non-bullying meeting at the Health Centre. Wednesday 30 Oct. 3.30pm

Bulletin

The Bulletin appears every Friday of term, with copy deadline the preceding Friday lunchtime. We welcome any suggestions for news, events, letters and small ads. Please contact the Information Office, Sussex House on ext. 8209 or email: Bulletin@sussex.ac.uk.
SEEKING A VISION
FOR THE UNIVERSITY OF SUSSEX

We are a successful university. Our research is outstanding, our teaching is of a high quality and we have a considerable national and international reputation. But we do have weaknesses and we face fierce competition. Budgets will be tight for the foreseeable future and we will have to adapt if we are to continue to be successful. We need to build on our existing strengths and exploit new opportunities where we have a comparative advantage. Our greatest strength is the quality of our staff. In putting forward this set of suggested key elements and questions for the future, I am attempting to elicit comments and further suggestions so that we can together develop a vision for our University into the 21st Century.

There will be an opportunity to discuss these issues when Professor Tony McCaffery and I visit the Schools this term, but I would welcome any written comments.

KEY ELEMENTS OF A VISION

1 Enhanced High-Quality Research
   • by attempting to direct more resources and time to research,
   • organised through GRCs and Centres of Excellence,
   • aiming at a highly visible international reputation,
   • seeking more industrial funded research and research with a 'surplus' element,
   • some research with a special emphasis on research geared to the needs of the economy of Sussex and the Southeast,
   • where possible linking regional research to national and international research

2 Expanded Postgraduate Education
   • seeking a higher proportion of pg students,
   • delivered through GRCs and Centres of Excellence,
   • aiming for increased international and national reputation for pg research students,
   • and expanded pg taught programmes, largely modular in structure, some full cost, and with much greater emphasis on the employability of graduates.

3 Improved Undergraduate Education
   • emphasising degrees offering 'learning within a context' of
     - greater choice of combinations of majors and minors, through improved modularity
     - re-designed and re-focused school courses
     - greater explicit emphasis on skills teaching
- more 'work' experience, including sandwich courses where appropriate
- increased year abroad opportunities,
  - employing high quality seminar teaching, addressing complex issues and problems, largely replacing tutorials and lectures,
  - complemented with IT based instruction,
  - introducing a limited number of new vocational subjects, e.g., medicine,
  - increased emphasis on part-time and mature students, and Life-long Learning
  - all aimed at improving the quality of the student experience.

4. **Stronger Partnerships**
   - with selected other European universities,
   - and with selected North American, African and East Asian universities,
   - and locally, with other Higher Education and Further Education institutions in the region for greater mutual benefit,
   - further developing the Academic Corridor and the Innovation Centre,
   - aimed at high regional (Sussex and Southeast) visibility,

5. **Improved structures**
   - based on budgetary units of a manageable size with clear budgets and responsibilities,
   - which permit cross-disciplinary interaction and encourage flexibility and innovation,
   - and with incentive-based budgets.

**KEY QUESTIONS**

1. **Research**
   At the last RAE we were ranked 10 in the country overall.
   a) Should we be more focused? Should we add research fields - if so which?
   b) What can we do to improve our success rate in attracting research council, charity, UK government and European Union funds?
   c) Should we be increasing the number of applied research areas in order to increase our industrial support?
   d) Should we create more international and national centres of excellence and give them prominence? If so in which fields?
   e) Should we give the GRCs the primary role in fostering research?

2. **Postgraduate Research**
   We currently have about 1000 pg research students, and rank 20th in the UK for numbers of pgr. If each research-active member of staff supervised a minimum of three students (one in each year of a three-year programme) we could increase numbers to 1,500.
   a) How can we increase the number of pgr students? Which fields should receive priority?
b) Should we be providing a greater formal training component in pgr programmes, in the form of credit bearing courses, offered across subjects and schools?

c) Should we be providing more university wide, credit bearing courses in teaching and learning aimed at teaching assistants and other pgr students?

3. Postgraduate Taught Programmes
Compared with similar universities (e.g. 94 Group) our proportion and overall numbers of pg taught students is low.

a) Should pgt move towards 50% of our student body?

b) Should our pgt programmes be more modular in structure (along the lines suggested in the Harris report);

c) Should we offer more professional/ vocational programmes? If so which?

d) Which programmes could become full cost, surplus generating?

4. Undergraduate teaching
This year applications have fallen and we have continued difficulty filling some subjects.

a) Could we market our undergraduate teaching better - providing 'learning in a context' rather than as interdisciplinary?

b) Should the skills component be built into every course or should some cross-university, specialist skill courses be provided?

c) Should we cut down on the number of school courses; should they take up a smaller proportion of a student's programme and be better designed?

d) Would it be better to concentrate on seminar teaching, at the expense of tutorials and lectures, in combination with greater use of IT for the delivery of basic information.

e) Should we reduce the number of courses on offer; should we move to a standard annual timetable, with minimal annual variants?

f) Should we be offering more professional or vocational oriented courses and programmes? If so which?

g) Should language minors be readily available to all students, irrespective of the major?

h) How can we improve recruitment from our feeder schools in the Southeast?

i) How can we increase the number of specifically designed part-time degrees (along the lines of the Cultural Studies degree); how can we make our existing course offerings more part-time friendly?

5. International Students
We currently have about 2000 international students, half from continental Europe and North America, the other half from the rest of the world. The proportion, about 20%, is high but not as high as other universities.

a) Should we increase the number of international students, particularly those paying full fees? If so, which regions and countries should we target? Should we give preference to ug or pg students?
b) Should we be more focused in terms of V/E university links, possibly giving preference to those where we have research collaboration?
c) Should we expand our year abroad to include southern Africa and East Asia (in addition to Japan)? Should we create South Africa and East Asia Institutes?
d) Should we consider franchising or validating overseas programmes?
e) What can we do to improve the welfare of overseas students?

6. The Region
Although we regard ourselves as a top international and national university, we have an important role to play in the region
a) Should we be seeking further FE and HE linkages in the region?
b) What should be the next phase of the Academic Corridor now that the Innovation Centre is complete and proving successful?
c) Should we be creating Regional Centres of Research Excellence?

7. Structures
Finally we need to examine our organisation. Our budgetary and administrative structures and processes are unnecessarily complex.
a) Should we further separate ug and pg teaching, by giving the GRCs autonomous budgets? Should faculty have defined divisions of time e.g. .5 ug School, .5 GRC?
b) Should we re-organise our current School/GRC structure? If so, what would be an appropriate configuration?

October 1996

Gordon Conway
Vice-Chancellor