The Changing Shape of British Science

University researchers working alone on scientific projects are an increasingly rare species according to a new report from SPRU. The report, The Changing Shape of British Science, details trends in UK science research over recent years. It reveals that medicine is the fastest growing area of scientific research in Britain and that hospitals are playing an increasingly significant role in that research. Universities participate in as little as 38% of medical research, and overall university researchers participate in only 60% of total scientific output.

"The most striking result of the study suggests that scientists of the future will collaborate more with individuals from other institutions and will work in many different types of organisation," says Diana Hicks, one of the authors.

The authors of the report constructed a large database of UK science publications to reveal a picture of the changing shape of British research. "The portrait that emerges is one of a dynamic, diverse and adaptive UK science base. In the next century British scientific research will be more applied, more interdisciplinary and will be performed mostly by networks of researchers rather than by individuals," says Sylvan Katz. Also, according to Dr. Katz, team working is becoming the rule rather than the exception. "By the year 2000, more than 50% of UK scientific papers will be produced by three or more researchers collaborating across two or more institutions and international collaboration has increased at a constant rate for over 20 years."

About 5000 institutions contributed to Britain's scientific output during the 1980s. Less than 100 of these were universities whilst 2000 were private companies. Scientific research is also being conducted by industry, hospitals, government departments, medical research institutes, research council laboratories and other non-profit-making organisations. Quantity is also increasing: overall output went up by 17% during the 1980s. 60% of output was related to the life sciences.
LETTER
The Sweet Sound of Silence
Further to the failure again of the campus telephone system for most of the day on Wednesday 15 November, can someone explain why, as an internationally recognised centre of excellence and advancement, we seem to have a telephone network befitting some third-rate nation? Are other large businesses and organisations plunged back to the semaphore days whenever there is an outbreak of lightning? For this to happen once on a modern system may be forgivable, but to happen several times over a short period is inexcusable!

Perhaps the Estates Manager could comment on these failures, and assure us that adequate protection will be provided to limit such shortcomings in the future.

Jerry Mitchell, ENGG

Estates Manager, Roger Bailey, writes in reply:
I share Mr Mitchell’s concern about the increasing incidence of lightning-induced failures of the telephone system. There is some evidence of an increase in lightning strikes on the campus, the cause of which is unknown. The telephone system is already protected against lightning strikes, but we are discussing with the manufacturers how to improve the protection.

Further freebies from the Gardner
The Gardner Arts Centre is again making a first-come-first-served offer for theatre tickets to readers of Bulletin
50 tickets for the opening night of Jonathan Harvey’s (Beautiful Thing) newest play, The Rupert Street Lonely Hearts Club, currently in London receiving rave national reviews. It is performed by the highly acclaimed English Touring Theatre Company from Tuesday 28 November until Saturday 2 December at 7.45 pm.
50 tickets for Trevor Watts’ Moire Music Drum Orchestra on Saturday 9 December at 7.45 pm. Leading alto-sax player Watts and his seven-piece Ghanaian percussionists will have you stamping your feet, clapping your hands and shouting for more.

NEW FACES
Benjamin Sauer, MAPS
Benjamin Sauer, a physicist from Yale, has arrived here to build a time machine. "We’ll have all these bright green lasers running round in the lab just as soon as the equipment arrives from America," he enthuses. The team with which Ben works asks a fundamental question: do the basic laws of physics look the same when time is going backwards as well as forwards? The team’s equipment will mimic the effects of time reversal, allowing an actual empirical test of the phenomenon.

Ben comes down to earth by way of sporting activity: cycling, sailing, jogging and skating. "Skating’s great," he says, "You just zoom off with absolutely no effort at all. But it’s kind of dull going round in circles for ever." He loves the fact that Brighton has a proper town centre. "In a town the size of Brighton in the US, there wouldn’t be anything in the centre except some fast food places and a few suburbs strung together." If he stays here, the next instrument to be shipped across the Atlantic will be his double bass - not quite as exotic as its predecessors.

Peter Scott, Biols
Peter Scott, new arrival in BIOLS, genetically engineers plants to study how they adapt to dry conditions. Although his research could lead to a new generation of desert-loving crops, his own garden had its fair share of problems. "The swedes never seemed to work, though they’re supposed to be footproof." Mine were always small and woody."
Peter is delighted to be living by the sea after a smoggy four years as a post-doc in Oxford. Never more at home than in clean mountain air, he walks and skis with his wife in the Alps and Pyrenees. A dab hand with a paint-brush, he recreates the snowy scenes in oils. Peter doesn’t have detailed plans for the future, but suspects he could be here to stay. "Since I’ve arrived," he says, "a lot of people have said to me ‘I only ever came here for five years, but I stayed for the rest of my life.’" The only question now is, how good are swedes with chalky soil?

Frank Schofield
Frank Schofield, the University’s first Senior Technician, died on 4 November, aged 68, after being nursed through a long and painful illness by his wife. Frank arrived at Sussex in 1962 - well before any students or faculty - to set up workshops for teaching and research in the then School of Physical Sciences. Ken Smith, a retired MAPS professor, remembers his life:

Frank came to Sussex as an excellent machinist capable of mechanical design, welding, brazing, sheet metal and woodworking and many of the other skills required for research in physics. He was a happy, outgoing, sympathetic, non-nonsense person who was hard-working and able to jolly his staff into producing their best. The staff always knew where they stood with Frank who supported them wholeheartedly and was always keen to introduce modern equipment into the workshop to cope with changing requirements.

Frank was in charge of the only effective workshop on campus during the period when the University grew rapidly, supporting not only the groups who set up the new teaching and research laboratories but often the construction workers as well. He always joined in the School social activities such as Christmas parties and cricket and tennis matches with students, making fun of the School management with his cockney good humour when things didn’t go quite as expected.

When Frank retired in 1986, he concentrated on his golf and bridge, playing and teaching them both at the East Brighton Golf Club. Every player in one local competition was handing a Mars Bar by Frank on arrival at the twelfth tee to supply the energy needed to complete the course!

I would like to send heartfelt sympathy and consolation from the members of the School of MAPS to Frank’s widow, Tina, and the family. I shall always remember Frank as a helpful, happy man who did his job extremely well and helped us so much during the critical years of the University.
Dear Editor,

As a Brazilian who lived in Rio, I'd like to comment briefly on the article "A man with a mission in Brazil" published on 10 November.

Matt Roper writes "[Brazil] is only just starting to get a social conscience." In fact, this isn't the case. In order to make such a statement, one needs knowledge of the social works that have been carried out in Brazil in previous years, and I don't believe Matt Roper has such knowledge. Many social works are done, and I myself have many friends and acquaintances engaged in them. The social problems in Brazil are overwhelming and very difficult to overcome, not only because of the lack of resources of the society, but because of the great difficulty in fighting greedy and powerful people whether they be Brazilians or members of the most economically developed countries. It's well known that over the last 30 years, the rich have become richer and the poor poorer in Brazil, as indeed rich countries across the globe have become richer and poor countries poorer.

England itself faces similar social problems in its society. Many of them, such as homelessness, violence, drug-addicted children, child abuse, and child prostitution, occur in less frequently, of course, due to better social resources. Yet, one of them — the killing of unborn children in the womb — occurs in large amounts, and regretfully, is legalised. These were reasons which led a Brazilian friend of mine to engage in charity works in England.

The attitude of Matt Roper and my friend is praiseworthy. They both care for people in need, although my friend, with a sense of reality which contrasts with the article title, doesn't see himself as a man with a mission in England. — Otavio A. S. Carpineiro, COGS

Dear Editor,

We were very surprised at the slant presented in Bulletin, on Friday 10 November. We believe that firstly you should consider that poverty is a world-wide phenomenon. Statements like the ones made in "A man with a mission in Brazil" must always be backed by empirical evidence and technical criteria that corroborate such findings (e.g. what reports have come from Rio? And do your photos really show children scavenging for food in the garbage?) If Matt Roper is really interested in "making a difference", we suggest that his future findings should be embedded in considerations on global poverty, non-equity and all the efforts that have gone into development research around the world.

Finally, Brazilian students at Sussex would be glad to provide him with consistent information to make your future statements more coherent. Instead of emotional observations, systematic analysis, institutional action and structural change are the factors we hope will really contribute to eradicating poverty in the world.

Ana Carolina Arroio & Paulo Figueiredo
Research Students at SPRU

Dear Editor,

Creche staff have come up with a solution for the car parking problems on campus. The model below is economical to run, parks easily leaving plenty of room for others and could even be parked between double yellow lines.

Janet Healey, Creche Supervisor

P.S. Thank you to the very kind lady who donated a guillotine to the Creche — it's just what we wanted!

Stephen Carter, Computing Service

RESEARCH OPPORTUNITIES

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

ROYAL SOCIETY RESEARCH FELLOWSHIPS 1996: applications invited in all branches of science, including agriculture, medicine, mathematics, engineering and technology. Closing date: 26 January 1996; Application forms available up to 12 January 1996.

INDUSTRY FELLOWSHIPS 1996: The Royal Society and the EPSRC aim to enhance communication on science and technology between those in industry and those in universities. Any subjects, including mathematics and engineering. Closing date: 8 December 1995.

ROYAL SOCIETY LEVERHULME TRUST & ROYAL SOCIETY AMERSHAM INTERNATIONAL SENIOR RESEARCH FELLOWSHIPS: to enable scientists in mid-career to do full time research (between one term and one year). Closing date: 15 December 1995.

ROYAL ACADEMY OF ENGINEERING SENIOR RESEARCH FELLOWSHIPS & PERSONAL RESEARCH CHAIRS: to support a senior researcher, or professor working in a field of particular relevance to the sponsoring industrial company. No closing date given.

ESRC EUROPEAN CONTEXT OF SCIENCE POLICY PROGRAMME: Stage 3 - Innovation and the knowledge base: managing the interaction. Proposals invited. 3 themes: Evaluating European collaborating and networking; Managing sources of knowledge and expertise for innovation; Managing human resources in European science and technology. Closing date: 2 January 1996.


UKPOLAND: The British Council is inviting proposals for research in the fields of agriculture, biotechnology, electronics, engineering, environmental sciences, management of science & research, materials science & new technologies, medical sciences. Closing date: 31 January 1996.
What’s on...

Lectures, Seminars, Colloquia

Monday 27 November
1pm Experimental Psychology Seminar: Conditioned place preference as an index of motivation and learning. S. Perks. Biology Lecture Room (EP 3.9).
2pm Particle Physics Seminar: Rusty Strings and Stainless P-branes. K. Stelle (Imperial), PB2A1.
2pm "Feminism and..." Lecture: Feminism and the philosophers and me. A. Stone, Arts D520.
4.15pm MOLS Chemical Society Colloquium, A. W. Johnson Memorial Lecture: New Strategies and Methods for Oligosaccharide Synthesis. S. Ley (Cambridge), MSLT, MOLS.
4.30pm Neuroscience Seminar: Neuronal Determination in Fly Eye Development. M. Freeman (Cambridge MRC), Biology Lecture Room.

Tuesday 28 November
1.30pm Psychology Seminar: Naturalistic vs laboratory mood: are overt mood procedures a viable analogue? C. Cameron, PB2A1
3pm Sussex European Institute Seminar: Globalisation and Autonomy and Sovereignty of the Nation State. D. Goldblatt (Open University), A71 in SEI.
4.15pm Biochemistry and Genetics & Development Seminar: The major histocompatibility complex in cattle: characterisation of class I genes and their products. S. Ellis (Institute of Animal Health, Compton), Biology Lecture Room.
6pm International Relations Seminar: Predictions in International Relations. M. Nicholson, EDB 121.

Wednesday 29 November
12.30pm Environmental Science Seminar: Environmental education: a community based action-research project. J. Perry, MOLS MS3.
1pm Poverty Research Unit Seminar: Pro Poor Urban Infrastructure; Rethinking Urban Poverty Assessments in Southern Africa. H. Cottam (Open University), IDS Room 221.
1pm Barlow Collection Talk: by Craig Clunas, Barlow Gallery, Library.
4pm CMAIA Colloquium: Synchronization in coupled systems. J. Hale (Georgia Tech), MAPS, PB1A.
4.30pm History of Art Seminar: Political Iconography and the West in late Eighteenth-Century Japan. T. Screech (SOAS), Arts B15.
5pm English Colloquium: Ivor Gurney the Elizabethan. G. Walter, Arts D640.

Monday 27 November — Sunday 3 December

Lectures, Seminars, Colloquia

Wednesday 29 November cont.

Thursday 30 November
11.30am Economics Seminar: Decision-making processes or rural households in Malawi. P. Cavoliatti, Arts D410.
12.30pm History and Gender Seminar: The Truth about Freud and Stetkel. F. Clarke-Lowes, Arts C251.
12.45pm Renaissance Theory & Culture Seminar: Renaissance Staging; Puritans Against Theatre. Arts A106.
12.45pm AWISE Talk: History of Women in Universities. C. Dyhouse, Terrapin, Science Car-park.
1.15pm Lunchtime Recital: Music by Debussy and Ravel. James Torrington (Piano), Falmer House, Recital Room.
2pm Statistics Seminar: Some statistical problems in telecommunication. P. Smith (Wellington/Exeter), PB2A2.
5pm Social and Political Thought Seminar: Rorty and Redescription. J. Horton (Keele), Arts D610.
5pm History Seminar: Foreigners, philosophers, and religious identities in Britain, c. 1750-1820. N. Aston (Open University), Arts A155.
5pm Geography Research Seminar: Mass Movements and Debris Flows along the Karakoram Highway, Northern Pakistan. E. Derbyshire (Royal Holloway College), EDB 302.
5.15pm Media Voices: Daniel Eker from Microtime Media. Arts A103.

Friday 1 December
11.30am "Learning Matters" Seminar: Writing for Ourselves, Writing for Others: Students helping students with writing tasks. R. Snell, Arts A102.
2pm Science Policy Research Unit Seminar: Strengths and weaknesses of Japan’s computer and communications industry. M. Fransman (Edinburgh), MAPS, PB1A.
2pm Russian Seminar: Rethinking the Russian Revolution. K. MacVarish, Arts A155.
4pm Astronomy Seminar: Activity in solar-type stars. Y. Unruh (St Andrews), PB1A.

Miscellaneous

Students Union Meeting
1:30pm, Tue 30 Nov, Second Union General Meeting, Mandela Hall. All students welcome.

UNICEF Cards on Sale
Mondays 12-2pm, Refectory. Until end of term.

Nursery Food Stall
12-2pm, Wed 29 Nov, Refectory. Homemade cakes, biscuits, sandwiches etc.

African Club Night: Mambara

Staff Evening at Boots
Boots invites University employees to a special shopping evening at their North Street branch on Wed 6 Dec, 6-9pm. 10% off all purchases (with some exceptions) and a prize draw. Invitation cards from the Personnel Office, Room 227, Sussex House.

Small Ads
FLAT TO LET: Small flat/ large bedsit in Lewes. Pretty & historic part of town. 3 min walk from trains. Own bathroom, kitchen & bed-sitting room on 3rd floor of listed house. Available 1 Jan. Tel: 477610.

ACCOMMODATION REQUIRED: Mon-Thursdays from Jan for non-smoking woman academic. Tel: 0181 748 1942.

IDEAL CHRISTMAS PRESENT: 2 vouchers for a Lady’s Beauty Day at the Metropole. incl. lunch, manicure, massage, solarium & more. Cost £90. Will sell for £60, Tel: Celia Schultz x3913.

CAR FOR SALE: Rover 2165i 5-door car. H-reg, silver-beige metallic. Security markings, electric windows/sunroof, stereo, 43,000 miles. Excellent condit. £2520 ono. Tel: Pat Hemsworth x2154, e-mail: P.M.Hemsworth@sussex.ac.uk.

CAR FOR SALE: VW Passat CI, Estate. F-reg, red, central locking, HRW. Excellent condition. £3350. Tel: Jaywant x2653/4.

CAR FOR SALE: Metro 1000, A-reg, 10 month MOT, service history, red. Mint sell. £460 ono. Tel: Pat x8429 or 556610.

IDEAL CHRISTMAS PRESENTS: all in excellent condition. 2 pairs roller blades (inline roller boots), size 2 & 3; one pair of roller boots, size 2; ‘United Challenge’, a football trivial pass-it game suitable for adults/children, cost £25, accept £10. Tel: Jenny Money on x2062 or Meeting House

Lunchtime Recital
1.20pm, Tue 28 Nov, Meeting House Choir.

Lecture

Cinema at the Gardner

Monday 27 November
11.30pm The Vanishing

Sunday 3 December
6pm Barnt by the Sun
9pm Spanking the Monkey
Tickets: £2.70 (£2.20 for Sussex students with ID and New Friends). The Gardner Centre Cafe is now open on Saturdays.

Bulletin

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