free speech

The Senate at the end of last term expressed its concern on the question of free speech on the campus, and proposed that widespread discussions should be held in the University at which the issues could be made known and debated.

The first of these discussions was held last month, at which one speaker made the point that, whether we like it or not, Universities have become more openly 'politicised'. Politics have come onto the campus and the campus is involved in politics.

One implication of that fact - and we imagine few would argue it is not a fact - is that many of the activities traditional to a University such as public lectures and learned discourses by visiting speakers are today subject to the same risks that attend such functions off the campus.

All the ingredients that once assured 'free speech' such as courtesy, and respect for a different point of view are no longer guarantees that a speaker will be able to make himself heard, or for that matter, even allowed on the campus.

However lamentable that may be it is now a fact of life in Universities in this country and abroad. The nature of student political activity has changed and is unlikely, in the foreseeable future, to revert to past patterns. The notion that a University can, under these circumstances, commit itself unequivocally to upholding 'freedom of speech' - if that means guaranteeing a hearing to any speaker whose philosophies will arouse hostility or who may become the innocent target for a demo on some issue or other - seems to us unrealistic.

Freedom of speech in the teaching/learning situation is of course a different matter, and the Senate has made it clear that any disruption of teaching would not be tolerated. However what is now being discussed is not the right of a tutor or lecturer to carry out his academic functions without interruption but issues of 'free speech' in areas not necessarily subject to academic or scholastic rules.

Here freedom of speech, and with it freedom for the expression of ideas is not, and never has been an absolute and unlimited principle. The community itself has imposed limits and is able to bring sanctions to bear when they are exceeded.

The difficulties facing us at Sussex will be solved, it seems to us, only through a redefinition of these limits in the light of changed attitudes within the University of both students and faculty.

We need to arrive at a consensus of opinion out of which may be derived a new set of ground rules. We need to define, in detail, how far we, as a community, are prepared either to modify or reinforce the principle of free speech not as a notional ideal but as a practicable objective.

Hopefully such consensus may evolve from discussion. But we need to keep our feet on the ground and identify areas of specific difficulty as a first step towards hammering out a common policy to what is a common problem.
Sussex University is featured in a new film made by the Bank Organisation for the Foreign Office through the Central Office of Information. The film, called 'Portrait of a People' lasts 28 minutes and is shot in colour on 35 millimetre film. Made for Expo 70 to help promote Britain, the film includes sequences on industry, shopping and education. Sussex was chosen to represent one of the modern British universities. Features on the universities of Oxford and East Anglia also being included in the film.

The sequence shot at Sussex lasts for about four minutes and includes general shots of the campus and the inside of one of the lecture theatres. The film is to be shown around the world and has already been seen in Australia and New Zealand as well as at Expo 70. There is also a possibility that it will be shown on general release throughout the country.

A further eighteen months. He was in command of a squadron of tanks and was asked to stay to train other officers. He still intended to return to Sussex either to complete his B.A. course or, if the Hebrew University was willing to grant him a degree on the strength of the work he had done there and at Sussex, to study for an M.A. In February 1969 the Students' Progress Committee wrote to him informing him that his leave of absence was being extended until October 1971 when he was expected to return.

Adam Weiler was extremely popular with both students and faculty while he was at Sussex. Professor Anthony Low, who met him in Jerusalem a year ago, describes him as very generous minded and enthusiastic. He was aged twenty-five when he was killed.

More recently Mr. Phillips made a further benefaction of £150,000 to the University which enabled the establishment of a Professorship known as the Reginald M. Phillips Professorship in Science Policy.

Doctor of Letters
E.H. Carr, C.B.E. Mr. Carr is a Fellow of Trinity College, Cambridge, and is the author of many books on historical and political subjects including 'The Bolshevik Revolution 1917-1923', 'The New Society' and 'What is History?'.

William Golding. Mr. Golding is a well-known novelist, his best known work being 'The Lord of the Flies' which was filmed in 1963. He lives in Bowerchalke, Wiltshire.

The Countess of Longford. The Countess of Longford, who lives in Hurst Green, Sussex, writes under the name of Elizabeth Longford. Her biography of Queen Victoria, 'Victoria. R.I.' won the James Tait Black Memorial Prize for Non-fiction in 1964. Matislav Rostropovich. Matislav Rostropovich is a distinguished Russian cellist and he has played in many concerts in Russia and abroad. He gave the first performance of Shostakovich's cello concerto, which is dedicated to him, at the Edinburgh Festival in 1960. He is to give a recital at the graduation ceremony.

Doctor of Science
Sir Harry Ricardo, F.R.S. Sir Harry is a consulting engineer and was Chairman and Technical Director of Ricardo and Company Limited until 1964. He lives in Graffham, near Petworth.

Adam Weiler

Adam Weiler, a Sussex student, has been killed in action in Israel. Born in South Africa, Mr. Weiler moved to Israel with his family when he was fifteen and he was educated at a boarding school in Haifa. He came to Sussex in 1965 to read International Relations in the School of African and Asian Studies. In June, 1967, he was recalled to Israel for Military Service. His place at Sussex was kept open for him as he intended to return later to complete his degree course.

While with the army in Israel, Mr. Weiler was able to continue his studies at the Hebrew University in Jerusalem. For a time he was tutored by David Vitali who at one time was a lecturer at Sussex.

In January 1969 Adam Weiler was asked to return to the army for

Honorary Degrees announced

A distinguished Russian cellist and a well-known novelist will be among those to receive Honorary Degrees at the Summer Graduation Ceremony on July 14th, 1970. The Cellist, Matislav Rostropovich, will give a recital at the Ceremony. An Honorary Degree is also awarded to Mr. Reginald M. Phillips of Brighton, who has given more than £300,000 to the University.

The full list of Honorary graduates is as follows:-

Doctor of Laws
Reginald M. Phillips. Mr. Phillips, who lives in Brighton, has been a generous benefactor to the University. He has given £182,000 for research into the education of deaf children and for the foundation of a Professorial Chair to promote research and teaching in the education of blind and partially blind children.

If Ron, who is expecting a communication from Rita would like to contact the Information Office, he may hear something to his advantage.
Once upon a time there was a student who woke up one morning with a headache. He asked his friend for an Aspirin and having swallowed it felt better. The student and his friend often helped each other with an Aspirin. But the next day the student again had a headache and his friend had no Aspirin left. The student went to the University doctor to ask him for one. "Describe your headache," said the doctor, for he had many pills in his cupboard and was anxious to prescribe the right one. The student did not find it easy to do this but he did his best and eventually went away with some tablets which seemed to make him feel better. But not many days had gone by before he again woke with the now familiar pain in his head. This time the doctor suggested they should try to find out what was causing the headaches and asked the student about his health when he was young. The doctor listened quietly and told him that many young men had headaches when they came to University. "This is a headache time of life," he said, and gave him not only the pills but some advice on how to avoid headaches at this time. Now the student did not like the advice and the next time he was suffering he went in search of his personal tutor. But when he at last found him he was disappointed to discover that his tutor did not carry any Aspirin with him. "Never mind," said the tutor, "we will arrange for you to see the doctor for this but meanwhile let us have a talk and see if we can find out what is wrong." So then they talked of many things, of the books the student had tried to read, the essays he had tried to write, the girls he had tried to love and the money he was trying to live on and the jobs he was going to try to get. "This is a headache place," said the tutor and gave him some advice on how to avoid headaches in the place. So the student went away and though about his headache. At first he thought it was caused by one thing and then he thought it was another; at last he decided he was worried about his future. And all the time his headache was getting worse. So he went to the Appointments Service and asked them about jobs. And this time, although his headache was aching really very badly, he did not talk about it but just did some tests and fied before anyone could offer him more advice. For now the student knew that it was Society that was upsetting him and that he must change Society; and he knew that all the University officers who would only give him Aspirin if he took it with their advice were also Society and that their advice was part of the infection he must fight. And he discovered that this was true too for many of his friends, And they gathered together and decided they would live through their suffering - without anodyne, "We will have no more Aspirin on campus," they cried. "It is stupefying us." So the doctors went and practised elsewhere and the personal tutors stopped being personal and just became tutors. And students read the Situations Vacant column in the Evening Argus and signed on at the local Employment Exchange. And although the suffering was great, the students were free and unfettered - behoven to no one, spared the inevitable exploitation of their weakness whilst they admitted to headaches and Society began to be changed. But sometimes, when the rooks flew up from the beeches in the Great Court, the student, his head between his hands, sighed for the time when he could ask his friend for an Aspirin.

PS

Is your headache really necessary? The Senior Tutor, who has a bit of a headache himself as a result of having been asked to make some recommendations for the future on Counselling, would like to know how you feel about Counselling in the University.
Nigel Calder (left) is an M.Sc. student with the Institute of Operational Research at Sussex. He is concerned at what, in his view, is a disturbing conflict within O.R. between its business-orientation and its academic responsibilities, and calls for more rigid criteria to govern contractual research on Campus.

The following motions were passed at an informal meeting of the O.R. subject group on Thursday, April 16th:

"1. That the only contract research that will be undertaken by members of faculty under the auspices of the O.R. subject group within the University of Sussex or the O.R. Institute will be that in which the relevant member(s) of faculty have a particular research interest, or is of use as a teaching vehicle.

2. That the members of faculty would receive no extra payment on top of their university salary for carrying out the contract research.

3. That no faculty or students at Sussex will take part in the activities of the proposed company called L.A.S.O.R. or in any other that is formed to carry out similar activities to L.A.S.O.R.

4. That any research carried out cannot be published immediately and that sponsors of the research are informed of this before any contracts or letters of intent are signed. The confidentiality of data will be possible, but results and conclusions of the research will be publishable immediately subject to the above confidences.

We fully realise that acceptance of the policy laid out above could curtail the amount of money we generate to such an extent that we could not meet our present financial commitments. However, we should not put the cart before the horse, and if we want to exist within Sussex University, our first consideration is to operate according to the standards set by Sussex."

(Note: L.A.S.O.R. is the 'Universities of Lancaster and Sussex Operational Research Institute' - the 'Institute' for short. There is therefore a direct contradiction between (1) above, where it is accepted that work may be done under the auspices of the Institute, and (3) where there is total disassociation from the Institute.)

Ambitions

Professor Rivett founded the department of O.R. at Lancaster in 1963, and moved to Sussex to found a similar department in 1967. From the outset at Lancaster it was recognised that the U.G.C. grant that the department received was not sufficient to fulfill their ambitions. The remedy was to so structure the courses that over 50% of students' time was spent on applied work - project work. In accordance with the belief that "there is merit in subjecting some of our programme of research to the rigours of the market place," faculty went around drumming up consultancy work, assigning a team of students and a supervisor to each contract. The income obtained was then used to expand the faculty, the purpose being to reach a staff/student ratio of 1/2 or 1/3, as this is the optimum project unit, enabling most money to be earned. From its inception, the O.R. department at Sussex followed the same course as that at Lancaster. Because of the prime role of Professor Rivett at both places very close links were established, culminating in proposals for L.A.S.O.R., a private limited company which would handle the business side of the two departments. Professors Mercer (Rivett's successor at Lancaster) and Rivett were made joint managing directors of the company, and relieved of most of their departmental commitments so that they could devote themselves to company affairs - "the Institute directors' time should come out of their commitment to the departments." A management committee was set up to aid the co-directors, with its principal responsibilities and loyalties to the Institute, not the departments - "We
have been elected... not to be devoted solely to propagate the wellbeing of our own university department" (Rivett in a memo). The company took over direction of the departments: "The head of department will indicate to each member of staff his commitment to the department and to the Institute. This will cover all aspects of the work of members of staff." The Institute has a contractual arrangement with the university's department of O.R. for the supply of certain individuals' services, which are performed as part of their department commitment" (both quotes from memos).

Long term plans were enunciated: "We have advantages arising from our being universities. Ideally we would retain the advantages while losing all the disadvantages. I think we can do precisely this... The style of operation I propose would be to recruit 80 very good new graduates each year on contracts of three years' duration. Ph.D. candidates would do an external Ph.D. from the Institute, and would be expected to "pay-off" their debt to the M.A. programme by doing work in the Institute." Certainly there appears to be nothing to debar private companies from operating independently on campus at Lancaster. "Legal organisation of other departments associated companies:... Marketing department: there is a private company whose shareholders include members of the department and the Vice-Chancellor and external people, the university having no shareholding whatsoever. The only legal link between the university and the company is... a service agreement under which 20% of the revenue of the company are paid to the marketing department." This is not the company called ISCOL referred to in the Sunday Times article "Professors in the market-place," 12-4-70, in which the university has a 51% shareholding.

Until informed by students, Professor West, Dean of Applied Sciences - where O.R. is situated - had no knowledge of either the private company status of the Institute, or that most 'research' undertaken within O.R. is confidential. Furthermore there is no record on any S.J.C. meeting minutes of any mention of the company. Staff themselves have, to date, had pretty well no influence over the Institute. At Sussex we have a very different staff to that at Lancaster and it is to their credit that they did not want any extra payments from the Institute, and that they have finally succeeded in informally passing the motions with which this article began; At this meeting one further motion was quashed; it read: "That before any contracts or letters of intent are signed, the member(s) of faculty, including prospective members who will carry out the work would be prepared to go before a working committee set up by the Vice-Chancellor and state that they are particularly interested in carrying out research in this area." The O.R. Group has been in danger of losing sight of academic procedures and principles. Academic freedom may be lost in commercial needs and desires (project work is not only usually confidential, but is generally tied, limiting the area of 'research' to a specific outcome desired by a specific company); academic integrity can wither in the face of the conflict of roles presented by academics running a profit orientated business as an integral part of the courses they give.

One final point about academic responsibility. When the quashed motion was quashed at the faculty meeting, the point was made, and this seems to be Professor Rivett's line in general, that it is up to Senate to say what can and what cannot be done. Academics have a wide degree of freedom generally, but it is dependant on them accepting the concurrent responsibilities.

'It is quite obvious that given a particular combination of circumstances... the universities' watch-dog function can break down...'

It is quite obvious that given a particular combination of circumstances and personalities the universities watch-dog functions can break down. What is needed to prevent any situation similar to that of O.R. arising again is:

1. To lay down RIGID criteria governing contractual research on campus, and company formation on campus.
2. To set up some body to check that these criteria are adhered to, and with effective powers to enforce adherence to them.
3. A far greater degree of participation by junior staff and students in the decision processes within their departments - it is particularly the junior staff in O.R. who have finally been responsible for letting it be known what is happening.
4. Impartial staff/student committees with powers to inspect all files within a department.

It can only be in the best interests of the university to engender far more democratic processes on campus. This is a MUST for Senate that this term it considers in far more depth the whole problem of contractual research on campus, and industrial influences, and that it comes up with some hard, enforceable decisions to bring the situation back under control.

PROF RIVETT REPLIES OVERLEAF
There are so many errors, omissions and selective quotations in Mr. Calder's article that it is rather difficult to know where to start. It might be useful to state the historical facts. The proposal for a joint Lancaster/Sussex Institute of Operational Research was made as long ago as September 1966, before any appointments to O.R at Sussex were confirmed. It was approved in principle by the University Senate in November 1966 and was referred to in the University's submission to the U.G.C. for the Quinquennium 1967-72. As soon as appointments had been made discussions were set up between the two Universities, as to the form that such an association should take. The result of these discussions, in which the Vice-Chancellors of the two Universities were concerned, was the submission of the more detailed proposals to Planning Committee and Senate in March 1969, after the agreement of Planning Committe and Senate to the general form of the Institute had been given. The next stage was to formulate detailed proposals, before going back through the formal University processes. To this end three members of the O.R. unit at Sussex were elected from the subject group and, together with the Finance Officer, the Registrar and the Vice-Chancellor, these discussions were continued. The legal advice which was received from the solicitors who were consulted, was that the Institute should take the form of a private company in which the parent Universities should each hold an equal number of shares. At the present stage of the discussions the form of the private company has still to be worked out. The results of these negotiations will then be submitted to Planning Committee and Senate via the subject group and the School.

Misconception

Many of Mr. Calder's misconceptions seem to stem from his failure to know the facts. I enumerate some of the errors in his paper as follows:

1. As a practical applied science any teaching of Operational Research has to involve reference to real, practical problems. This is why practical project work appears as an integral part of the M.Sc. programme. If O.R. was a purely theoretical discipline there would be no need to have such practical work or to operate in the way we do. In addition, the M.Sc. programme is not a research programme but is rather more like the fourth year of an undergraduate course. Some at least of the projects on which faculty work are teaching vehicles rather than research studies.

2. Motions which he refers to as being opposed or "quashed" at the O.R. Subject Group meeting were not in fact formally presented. He has quoted extracts from a paper submitted for consideration by one member of faculty. It was the general view of the meeting that while appreciating the general spirit of the paper, it would be wrong to be too specific at this stage since Senate is now considering the whole matter of contract research. The meeting agreed with my own view that we should express our continued desire to act in accordance with the standards of the Sussex community as expressed by Senate. This is an affirmation of what I have always felt, rather than any brand new idea.

3. The only members of the University who have gained any personal income from the activities of the Operational Research projects have been the postgraduate students who, this year, will share supplementary grants totalling £2,500. (So far Lancaster graduate students have received over £30,000 from outside sources.) No student has
THE ARCANE ART
OF THE RESEARCH DEGREE

Marjorie Reeves, considering the venerable English universities and the craft guilds on which they modelled themselves, remarks that it is surprising to find so inappropriate a model so little altered in our time. Apparently the belief persists that the university teacher practises a mysterious art, for which only an arcane test will prove him fit.

This test is the research degree. Like other rites it has developed its own discourse and manners: not until the apprentice has mastered them is he fit to become an academic journeyman, versed in the silent language of his peers. He must learn, for example, to bobble along (as I am doing) on quotations from his masters, to cultivate detachment, to respect the sanctity of evidence, and to learn that avoidance of the first person singular which - as Liam Hudson says - is a scientific skill all its own.

The price of disobedience is likely to be neglect. The academic community will hear and forgive those, like Cleaver and Genet, who are prepared to make linguistic atonement. Those who can't, or won't, crack the code usually have to look elsewhere for an audience.

by Gerard Macdonald
a New Zealand Graduate
working in the
Centre for Educational Technology

Now, I don't question the university's right to insist on a nicety of manners, or to test those of its apprentices. But such concern in a wider society often becomes a sign of social psychopathology: and so it may be here. Particularly in the humanities and the social sciences the criterion of research style may precede that of content - a priority calculated to produce trivial (if elegant) research. It is possible in this context to generalise Abraham Kaplan's remarks on the doctorate in philosophy: 'what are called "professional standards" are, to a great degree, standards of professionalism, not significant performance. They are to a considerable extent initiation rites rather than realistic assessment of the capacity to contribute to the philosophical function....'

As this quotation suggests, the academic community is not altogether happy with its gatekeeping. Improvements have been suggested, and three seem worth considering. Firstly, we should stop trying to make research seem more scientific than it is. 'The traditional method of reporting scientific experiment is not merely to swaddle it in jargon, but to give it coat and tails. The literature is reviewed, hypotheses stated, method defined, results presented, implications discussed, and acknowledgements made - all in accordance with a rigid protocol. In practice scientific research is frequently a muddled, piratical affair, and we do no service to anyone by pretending otherwise' (Hudson 1967).

In the social sciences these pretensions can be particularly misleading.

'I have found mathematical sociology and mathematical economics to be suffering under a misapprehension of what is the proper use of mathematics in the social sciences... The success of mathematical physics led the social scientist to be jealous of its power without quite understanding the intellectual attitudes that had contributed to this power... The mathematics that the social scientists employ and the mathematical physics that they use as their model are the mathematics and the mathematical physics of 1850... Their quantitative theories are treated with the unquestioning respect with which the physicists of a less sophisticated age treated the concepts of Newtonian physics' (Wiener 1964).

SUGGESTION

The second suggestion is that the academic community should abate what might be termed its cult of impersonality: '...the genius and peril of academic research is that it unearths and weighs information in ways very different from those used by laymen. The academic profession places very little weight on knowledge derived from individual subjective experience... So long as 'hard' data are used to extend the researcher's 'soft' experiences and curb his prejudices, the tension between the individual scholar's subjective experiences and the professional emphasis on universalism and replication is likely to remain creative. But 'hard' research has a persistent tendency to take on a life of its own, accumulating by an internal logic that takes no account of any one individual's subjective experience. The researcher's work thus ceases to have any effect on the rest of his life, and conversely his life has little effect on his work.

'If this is the case, the critical problem of graduate instruction in the social sciences and the humanities is to narrow the gap between the individual students' personal lives and their work. The graduate school must somehow put the student in closer touch with himself, instead of making him believe that the way to get ahead is to repress himself and become a passive instrument 'used' by his methods and his disciplinary colleagues' (Jencks and Riesman 1968).

Thirdly, it is contended that useful (as distinct from impressive) research is often beyond the competence of a single unaided student. 'The person who is adept in writing a questionnaire needs the help of a sophisticated statistician in evaluating his results. The senior professor who develops an interesting theoretical idea needs a project director... In principle, one might imagine that such combinations of skill could be improvised whenever a new task arises.
refused to accept his supplementary grant because he feels its source is tainted. Even Mr. Calder has, so far, accepted his money without protest. Some may call this illogical.

4. Mr. Calder seems to regard the desire for growth as a sin which is only committed by O.R. I know of no scientific subject in Sussex which doesn't wish to grow and I know of none who do not, to quote Mr. Calder's phrase, "Recognise that the U.G.C. grant that the department received was not sufficient to fulfil their ambitions". It is impossible to offer a proper academical course in O.R. or in any other discipline, unless a critical mass of faculty is reached. The U.G.C. logistic staff offered by the University to O.R. at present is only three. Clearly this is insufficient to offer a third-year undergraduate major option, an M.Sc. programme and a D.Phil. programme. To get adequate coverage of the subject, at least eight professional O.R. staff are needed and we need to expand beyond our present numbers to achieve this. I want Sussex to have the biggest and best O.R. group in any University in this country, subject to the University's agreement, and I must confess I feel no sense of shame! It is certainly the case that the best faculty are, in general, attracted by departments which offer expanding opportunities. If Mr. Calder looks on a desire for growth as being the eighth deadly sin, then Sussex has a distressingly large number of deadly sinners.

5. Since the Institute has not yet been formally established, to write of operating "under the Institute" is misleading.

6. To refer to a staff-student ratio of one to three, with reference only to the Master's programme is, of course, silly. As mentioned above, we offer facilities beyond those at present enjoyed by Mr. Calder and the effective staff-student ratio overall is less.

7. Professor Mercer was not my successor at Lancaster.

8. The various selective quotations which Mr. Calder makes all refer to working documents put up as proposals at various stages of the preliminary discussions to which I referred above. The end point of those discussions we have had was that the Institute would have been completely under the control of the academic side and hence of the two universities.

9. Of course Professor West did not have any knowledge that most of the research undertaken within O.R. is confidential, since it is untrue. We shall be submitting all our letters of intent referring to our projects, to the Senate Committee. Certainly no set of correspondence which I have had with any outside organisation has referred to secrecy, except one last year with the Home Office, where the object was to study real cost of fires suffered by the community.

10. One wonders why Mr. Calder undertook this particular postgraduate course since it is well-described in form and content and general philosophy in the prospectus. We are fortunate indeed that it is turning out to be a most popular course in stimulating a flow of applications. For example, for next year's entry to the M.Sc. programme we have so far received one hundred and sixty applications and Lancaster have received a similar number.

Advantages

One of the advantages which we hoped would accrue, and may well still do so, is that where we have an excess of demand for research services, some members of faculty can, if they wish, carry out such research in a private capacity. Many science faculty have private consulting which they undertake and this is perfectly acceptable. The formalisation of the schemes which we had considered for the private company would have meant that because the income stemming from such private consulting work would have gone only into the University funds, it could have been paid to individuals only with the sanction of the University authorities and would have been subject to the external audit of the Controller General. Any 'profits' as such would have gone into University funds.

My personal reaction to Mr. Calder's intemperate attack is that by its innuendo it makes reflections, which I bitterly resent on my own behalf and on that of an honest, honourable group of faculty of high personal integrity.

Notes:
Marjorie Reeves in Higher education, demand and response (ed. W.R. Niblett) Tavistock 1969
Abraham Kaplan: 'The travesty of the philosophers' in Change January/February 1970
Liam Hudson: Contrary Imaginations Pelican 1967
Norbert Wiener: God & Golem Inc M.I.T. 1964
Christopher Jencks and David Riesman: The academic revolution Doubleday 1968
P. F. Lazarsfeld and Sam Sieber: Organising educational research Prentice Hall 1964
184,659 LOANS A YEAR

THE LIBRARY: too many wanting too much from too little?

How good a Library can Sussex afford? The question is crucial, and is one now being considered by a Planning Committee Working Party. All University Libraries at present face serious financial difficulties, and Sussex is no exception.

At a time when the production and publication of a wide range of materials continues to increase library users are finding that access to information is hindered. Costs of existing materials and services are rising all the time. For example in the periodical field alone costs over the past year have risen by 18% and some items by as much as 60%.

Repeated pruning has taken place in periodical collections, with the result that Sussex now has one of the lowest levels of periodicals expenditure in relation to its numbers and the range of its interests. Nevertheless despite these economies it has not proved possible to meet requests for the addition of fundamentally essential new periodicals.

In a preliminary report published earlier this year by the Library Information Officer the shortcoming of the current situation were made all too clear: "The greatest problem facing the Information Officer is the total absence of certain standard information sources. Unless this situation can be remedied, much of the material recommended in seminars will not be available on the spot and the Information Officer will find it impossible, in spite of evident demand, to provide a service."

Undoubtedly the demands that a library makes upon an institution may be as unlimited as a bottomless pit, however much financial ballast is poured down it. As the Librarian of Harvard has pointed out: 'A University Library should not bankrupt a University, but equally a University must not bankrupt its Library.'

At best such a situation calls for a precarious act of fiscal balancing. The needs of the consumers who in fact determine the demand, have to be weighed against the amount of financial support the institution is both able and prepared to make available. In this respect the demands put upon the Library at Sussex are heavy indeed. The exceptional nature of the load is perhaps best illustrated by the fact that in 1966/69 the Library dealt with 247,682 loans. In contrast the University of Edinburgh, with 10,500 students compared with the Sussex total of 3,800, had 184,659 loans, and Southampton, with 4,300 students, 77,343 loans.

Ironically the problems facing the Library arise largely from its successful integration into the Sussex teaching-learning pattern. As a tutorial-based University the accent at Sussex is on individualised study which has led inevitably to an almost unlimited demand for course materials.

DEMAND

The Librarian, Dr. B. Enright, has pointed out that the Library is at present scarcely able to keep up with this demand let alone expand to meet future needs. At the same time there has been no dramatic increase in University Library expenditure. The Parry Committee Report on University Libraries recommend that the average percentage of budget expenditure on Libraries should be 6%. In 1967/68 Sussex spent 4.6, Kent 4.8, Lancaster 6.4 and Warwick 7.3.

However the new Universities spending was in all cases more than the national average of 3.9%.

At Sussex the Library has received, from time to time, additional financial support over and above amounts allocated on a recurrent basis. For example last year an additional sum of £10,000 was made available. "That sum," reports the Librarian, "was not sufficient even to cover the inflationary effect of rising prices of materials."

The inflationary situation is, of course, one over which the Library has no control. Equally few members of the University would be prepared to contemplate a policy by which demands were to be controlled by, for example, a restriction of Library opening hours. Such a step would be alien to the role of the Library which aims to encourage rather than deter its consumers to make the fullest possible use of its resources for both teaching and research programmes.

In relation to course demands on the Library, the findings of a study project under the aegis of Professor Roger Blin-Boyle, which is examining undergraduate teaching, hopefully will provide information on which decisions may be made. It is an aspect that undoubtedly will also exercise the attention of the Planning Committee Working Party, under the Chairmanship of Dr. Farrer Brown, the Deputy Chairman of the University Council, which includes among its members Professor John Maynard Smith and the Secretary of the Union.

Decisions as to what economies are desirable now and how the Library is to develop to meet the expansion of the seventies cannot, in all logic, be separated from the considerations that govern the University's planning for the next quinquennium.
THE ARTS CENTRE and (right) 'THE NUNS'

Student drama reduced to the absurd

On Tuesday, 19th May, the U.O.S. Theatre Club opens its second production in the Arts Centre, Shakespeare's 'Tempest', directed by Nicholas Woodeson. The first production, 'Sergeant Musgrave's Dance' was a great success particularly considering that this play has never had a successful professional run. However, some criticism was levelled against it, namely that it was a "safe, repertory play". Perhaps the same kind of criticism will be levelled at 'The Tempest'. In which case, now seems like a good opportunity to explain the reasoning behind the choice of plays like these. The Theatre Club has a manifold role to play but, most importantly, it is a student theatre; it should represent a student consciousness. Does this mean that the drama which students produce should be written only by students?

At last year's N.U.S./Sunday Times Drama Festival, this scene was totally arid. Watching productions at the Festival, you felt that you had seen it all before. In fact, you had; they were reworkings of Kafka, Sartre, Pirandello, Jarry, Ionesco, Genet, Pinter, Beckett and so on. The Festival was spelt with a capital A - for Absurd. But where do we go from the Absurd? This Festival was certainly not pointing out the direction, but at least there was the feeling that people needed to move, and that they also felt the need to move. They were exploring what was around them, trying to create something new out of it.

The American Theatre is already moving. It found the tradition that it needed, a tradition that has little or nothing to do with European Theatre as it is now or has been for the past 300 years. The American Theatre has not broken away from its tradition; it has found it. It has broken away from the "artistic-commercialism" of say, Arthur Miller and, with it, his dishonest radicalism, and has embraced the commercialism of the American Musical, the dance, the drag show, the camp, and transformed it into a living, breathing, communicating art form. However, the wholesale imitation of American techniques is of no use to us, even with groups that have achieved the same level of technical proficiency, since our tradition is largely a verbal one. We are not going to solve our particular problems by 'going American'. Nevertheless this does not mean that our actors shouldn't learn how to move properly.

Moreover, we can learn a lot about solving our own problems by learning how the Americans are solving theirs. To this end, we have invited down to the University, the young American director Roger Hendricks Simon who has had a great deal of success with the Meagan Terry play "Keep Tightly Closed" at the Roundhouse and the David Hare play "Slag" at Hampstead. He will be at the Arts Centre for the week beginning May 1st. With his company he will present the Terry play and through the week run workshops and master-classes for the students.

As for our own tradition, we took a standard play, "Sergeant Musgrave's Dance" and tried to approach it in a fresh way, to find out how and why it works. We will do the same with 'The Tempest'. However, this return to grass roots operates in conjunction with the more directly progressive work of producing new University drama. In the Arts Centre, after 'The Tempest' closes, there will be a week of lunchtime events, aimed at presenting short plays by writers at the University, such as Gabriel Josipovici, Rod Lewis, Robin Lee, and Jeremy Lane. A production of "Tango", by the Polish playwright, Mrozek, is also scheduled for the summer term. A series of small workshops will also operate to try and analyse and resolve the problems faced in running the Actor's workshop, which runs throughout the year.

This, then is the programme for the U.O.S. Theatre Club, for the coming term. It is a conscious effort to bring to bear the same kind of radically critical approach to Theatre as should inform every other student activity.

JOHN MCKAY, President, Theatre Club, U.O.S.
nature's imperfections magnified

There is around us an invisible world, or at least a world that is normally hidden from the naked eye. Take a human hair, magnify it 100,000 times, and one sees a strange, bulbous-looking 'plant' with roots and tendrils. Freeze a small amount of air until it looks like ice on a windscreen, examine it at high magnification, and one sees a world in which the tiniest particles of matter are arranged in patterns that are witnesses to the artistry of nature.

It is this world, with its atoms and molecules, crystals and cells, that is revealed to the research worker, be he physicist, engineer or biologist, by the electron microscope. An immensely powerful tool that is essential to a wide range of studies being undertaken at Sussex.

For example the scientists would like to know a great deal more about how crystals are formed and how the structure of crystals influences the qualities of materials. Crystals formed by condensing gases are particularly

simple types and these are being used for a study of crystal growth in a microscope which is adapted so that samples can be frozen inside it using liquid helium. This is a field that has not been investigated before and for the most part these studies are inspired by plain curiosity; however the investigations do have some relevance to the manufacture of very thin metal films - used for instance in the making of integrated circuits for computers - which are formed by first evaporating and then solidifying metals.

The strength of these materials is dependent on the manner in which the atoms are grouped, and particularly on the imperfections present in the crystals.

Just what are these imperfections?

When a nail is hit on the head the number of imperfections in the material is dramatically increased. Similar effects are produced inside a nuclear reactor where the imperfections are produced by irradiation. These imperfections are being fully studied using electron microscopy.

These studies are carried out on a Transmission Electron Microscope which, a bit like an X-ray, is able to look through thin samples.

Another kind of microscope - the Scanning Electron Microscope, works like a television set. Electrons scan the sample under study, and the picture appears on a 4-inch screen usually magnified up to about 10,000 times. This type of microscope is widely used, simple to operate, and in a sense does the same job as an ordinary microscope but is more powerful.

In the School of Mathematical and Physical Sciences, research is being carried out to develop a method of polishing lenses by bombarding glass with ion particles - travelling at around 1 million mph - are 'fired' through a vacuum tube by a particle accelerator.

The result of the bombardment on the glass is then examined under the electron microscope to measure the degree of smoothness of the surface. This method of polishing lenses would have the advantage of saving enormous amounts of time compared with conventional methods of manufacture which still rely on hand-polishing to a large extent.

Even conventional electron microscopes are expensive pieces of equipment, costing around £18,000. The University has been able to make facilities available and offer a service to several local companies who have regularly to examine their products under an electron microscope but who may feel they cannot justify the purchase of their own equipment.

Thus the electron microscope is today an essential tool both inside and outside universities.
A SCHOOL OF INTERNATIONAL & HISTORICAL MARXISM?

BY KEN GEERING

"A 40+ LUMPENPROLETARIAN.. WHO WOULD LIKE TO SEE SUSSEX 'LESS LIKE AMERICA'S ALBANIA'"

When Focus invited suggestions re new Schools for Sussex I wrote suggesting a School of International and Historical Marxism. I received a short, to-the-point reply from Asa Briggs saying that the most that could be expected would be the bringing together of existing Marxist courses - because the U.G.C. would be most unlikely to agree to a School of Marxism. I accepted the logic of this without enthusiasm, and decided to let the subject ride. However, so puérile were several comments on Marxism at the meeting called to discuss the role of universities at which representatives from Warwick and other universities spoke that I determined to take the matter to the editor of Focus. As a result, I have been given the opportunity to put the suggestion forward in a 500 word article.

Coming to Sussex as a sort of lumpen-proletarian, 40+ mature student as I do, I doubt if I can set out my case in the form required by academic orthodoxy in 500 words. Never mind. I do not doubt that the point is made:

Why a School of International & Historical Marxism?

1. The 20th Century is the century of Marxism. Whoever likes it, or doesn't like it. Since 1848, Marxism has become an international movement to an extent that no other movement has; before or since. On the graph of history its line exhibits many zig-zags, but the direction is relentlessly upwards. No human being on this planet is unaffected by its progress. I suggest that this becomes more true with every passing year.

2. No such school exists elsewhere in Britain. What form should it take?

1. Staff. Drawn from the major Marxist trends. (For brevity's sake, and for e.g.: 'Academic', 'Stalinist', 'Trotskyist', 'Maoist')

2. Subject Matter. Drawn from every period of Marxism. Marx/Engels, still today. And from all basic aspects of Marxism.

Objectives. Cost; any new School will involve expenditure. Such is the nature of the publishing of Marxist books that library costs would probably be lower than for any other School.

The U.G.C. would not "like" such a School. An explanation for its rejection. Not a reason.

 Factionalism. "Factions" exist in all worthwhile studies. Their existence is a "plus", not a "minus" phenomenon.

Russia, America (& Lesotho & Andorra !) do not permit "anti-establishment" Schools. So what?

Not enough students. Such a unique school would attract applicants from all over Britain. All over the world, in fact.

Too few Marxist Lecturers. See last paragraph.

'Bias' would be introduced (!) 'Bias' exists in a class-divided world. The next truly objective student or faculty member any of us meets will be our first. The nearest we get to 'objectivity', surely, is for all 'biases' to contend; equally? And for each bias to be openly stated. Let us begin by calling our 'liberal' University what it is: a capitalist university. And 'the West' (Britain and Japan) what it is: capitalism. Quite objectively. Quite unpejoratively. Next, let our declared liberals support a suggestion which - if taken up - would make Sussex the world centre of an exciting and academically valuable experiment. And - incidentally - a little less like America's Albania.
a wife, a child, and a council house in London

David Howells is one of about 30 'mature students' at Sussex. He receives £1.10 a week for living away from home

Sussex University has gained something of a reputation for encouraging applications from older candidates who want to enter university. Several students are accepted through the Early Leavers' Scheme each year and the scheme is generally regarded to work very successfully. It is apparent that these mature students and early leavers coming to Sussex are managing to cope academically. But these students have other problems which are common to mature students at universities all over the country.

David Howell, a second year Sociologist is very concerned about these difficulties and has started a Mature Students' Association at Sussex to help to try and find some solution.

Mature students have social problems but it is their financial situation which most urgently needs attention. Although there are only two mature students at Sussex who have been refused grants altogether, few are free of financial worries, especially those who are married with families.

Mature students have the same basic grant as other undergraduates with allowances for age and marital status. These allowances are absurdly unrealistic as David Howell points out:

'I have a Council house in London which naturally I do not want to give up. Because of this I have to leave my wife and child in London and take a flat down here. The allowance I get from my local authority for living away from home is £75 a year - £1.10s. a week.'

Like other students in his position David Howell has to work through his vacation in order to support himself and his family.

Problems

Investigating senior students' problems Mr. Howell finds that very little research has been done in this field although this is something which should concern both students and authorities at universities all over the country. A colleague is working on a project investigating the whole issue and is collecting information which will be of vital assistance to the Mature Students' Association.

'What the Association needs,' says Mr. Howell, 'is concrete information on mature students and their problems. Once we have this we will be able to put our case clearly and fight for what we want.'

On a national level there is a Mature Students' Union which has links with the National Union of Students but is not helped by them financially. The reason given by the NUS for their failure to do this is that if they agree to help one small group they would be expected to help them all - something they just cannot afford.

One of the main injustices in the grants system, according to David Howell, is that the ordinary undergraduate is automatically given a grant by his local authority if he is accepted by a University but this is not necessarily the case for a mature student. Acceptance by a university, says Mr. Howell, should be the only criterion for eligibility for a grant.

David Howell is very concerned that the Mature Students' Association at Sussex should be well organised. The real problem facing the national Mature Students' Union is that it is like forming a T.U.C. before there are any trades unions. They must be organised locally before they can make themselves heard on a national level.

A representative of the Mature Students' Union is coming down to Brighton shortly to help the attempt to co-ordinate the regions. The College of Technology and the College of Education will be invited to an open evening with the Union.

Controversial

Another controversial issue is that of insurance stamps. Very few mature students can afford to pay for their stamps while they are at university so that when they leave their contributions have lapsed and it is six months before they can claim any benefits. This can lead to serious financial difficulties especially if the student concerned has a wife and family to support.

Mr. Howell feels that mature students in particular and ideally all students should be credited with stamps while they are at university. The Mature Students' Union have tried approaching the Department of Education on this matter but without success.

It is sometimes suggested that the special difficulties mature students experience lead to them becoming more liable than other undergraduates to abandon their courses before completion. David Howell believes that
Mature Students

there is evidence to support this theory.
'From the project that has been started we find that there are older students who give up their courses before they expire for non-academic reasons. At least two that we know of have given up half way through and two have had to take a year off for financial reasons.' Commenting on the relations between the Mature Students' Association and the students' Union at Sussex David Howell says: 'They have given us some help where we have asked for it but we don't want to just sit back and propose motions which may well be carried. We want to make an impact. Our problems require discussion as well as attention.'

Grants

'This term we hope to hold an open discussion on the question of grants. The problem ordinary trades unions have to face is that workers in industry are only concerned with local problems and tend to dismiss national issues. At universities the situation is reversed - the students' unions are outward looking and tend to forget that they have problems on their own campuses to be solved before they start looking further afield.'

For many mature students the time lag between leaving school and coming to university is extensive. Techniques of essay writing and reading are not taught at universities and many mature students find it difficult to adjust to the academic environment. Many of them also have a social problem, finding it difficult to mix with students who may be of a different generation or come from different backgrounds. Some students have joined the Mature Students' Association primarily for social reasons. Membership of the Association is entirely unrestricted. Another issue of concern is that of vacation grants. The £6 a week students can claim at present rarely covers all expenses. There is also the fact that at Sussex great emphasis is laid on the importance of vacation work as an integral part of the course. The mature student is expected to carry out his vacation studies which may take several weeks and will probably at the same time have to take a paid job owing to financial pressures. It is not always possible to look at the problems facing mature students separately from those affecting other undergraduates but, according to David Howell, there are five main issues on which reform is needed. These are, first, acceptance at university should automatically make any person eligible for a grant, second, grants must be increased and allowances automatically increased in proportion every time grants are raised, third, the N.U.S. should recognise and give financial support to the Mature Students' Union, fourth, that students' unions should be made aware of the problem by the NUS and should attempt to give as much help as they can, and finally, National Insurance contributions should be paid by the State.

A SCHOOL OF ENVIRONMENTAL SCIENCE

In the March issue of Focus, Professor Tom Elkins put forward the proposal that the University should establish a new School of Environmental Studies. This would be a school focussed on man in his environment and it would clearly lead outwards from man to his environment. What I now want to ask is whether the University should also interest itself in the Environmental Sciences.

By environmental sciences, I mean subjects such as Geophysics, Oceanography and Meteorology. There is obviously going to be an increasing interest in the quality of our environment and it seems desirable that students whose basic interests are scientific should be encouraged to enter the field. Many of the problems involved in regulating our environment are complicated scientific problems and many of the mistakes in the past have been made because there has been an inadequate awareness of these problems. As examples, waste products discharged into the atmosphere, rivers and oceans have not dispersed in the way that was hoped and mining and quarrying may have side effects, for example on the draining of neighbouring land. If we are to plan for an improved environment in the future, there will certainly be a need for many people with a full awareness of the human problems involved but there will also need to be many trained scientists who can advise on the scientific and technical aspects of the situation.

Should the University of Sussex consider developments in this field?

I am not at present making a positive proposal that we should introduce undergraduate studies in environmental sciences and I am certainly not proposing a rival School to the School of Environmental Studies but I hope that the possible introduction of environmental sciences can be discussed seriously. There are certain difficulties involved in introducing subjects such as geophysics, oceanography and meteorology into an undergraduate curriculum. If they are to be introduced, it seems clear that they must be pure sciences. It is quite possible that any final decision to teach such subjects to undergraduates might be dependent on finding able workers in the field who are attracted towards introducing their subjects to undergraduates. If environmental sciences are to be taught in the University, the simplest solution would be to broaden the scope of the proposed School of Environmental Studies. Such a solution would make it likely that the environmental sciences would be taught as useful subjects which would not necessarily be true if geophysics, for example, was taught in a School entirely devoted to physical sciences. The introduction of the strictly scientific subjects into a School of Environmental Studies would have two main purposes. It would ensure that faculty members on the side of the social and human sciences who would have colleagues in the physical sciences who would provide knowledge and opinions about the feasibility of various proposals for the control of the environment. It could also provide an attractive course for students who really wish to study science but who also wish to feel that they are being useful to mankind.

PROF R J TAYLER
NEW SCHOOLS:  
A 'DEVIL'S ADVOCATE' EXAMINES THE PROBLEMS

Professor Bernard Scott, (left) takes a look at some of the implications behind the various proposals for new Schools made to date. He suggests that fragmentation of existing Schools might be a more efficient development than the creation of entirely new Schools, particularly as Sussex has not yet solved 'the problem of straddling subjects'.

The University of Sussex is not short of progressive enthusiasts bursting with interesting ideas to put into operation: some of us have already learnt that not all the exciting ideas work as easily and as well as their proponents hope. Of course this does not mean that the new ideas should not be pursued, but it could well save disappointment if the difficulties of new proposals were looked at no less carefully than the attractions. In this world we get nothing, not even progress, for nothing and we would do well always to be as much aware as possible of the price we may have to pay for what look like attractive innovations. In this article therefore I propose in part to act as Devil's Advocate, not because I am opposed to all forms of progress, but because I feel that progress is likely to be more firmly grounded if the difficulties have been squarely faced from the outset.

The Vice-Chancellor has very rightly started the discussion at the beginning by explaining why we might want new Schools. It may be that I have misread his views, but it seems to me that he raised (in his article in Focus) two particularly interesting points.

(1) New Schools would mobilise energies and capture attention. (2) There is a very strong case for reviewing the University "mix" if we grow in size to say 6,000. Now the first of these statements is perhaps less conclusive than it looks at first sight. Suppose we were to re-write it as: (1') New Schools will dissipate energies and distract attention. It is not clear to me on what grounds one could assert that either (1) or (1') is obviously a truer statement than the other.

COMPELLING

Point (2) is more compelling in the sense that there are obvious drawbacks in attempting to work a University of 6,000 with the same number of Schools as one of 3,000, since in this way Schools might become uncomfortably large. But on the other hand, an increase in the number of Schools in itself provides much extra organisational complication: it is elementary mathematics, that doubling the number of Schools will multiply by at least a factor of four the complexity of arranging essential inter-School co-operation. So if we do increase the number of Schools it may well be that we cannot continue to give them the same degree of independence as at present, nor will it necessarily be economic to group them in only two Areas. And this raises some serious questions.

If we are to have a new Area of Studies besides the present Arts and Science Areas, the obvious candidate, as Brian Easton has suggested, is a broadly based Social Studies Area, which in the light of the Vice-Chancellor's sketch (to which we shall return later) of a new context for it might well include Education. Of course it can be argued that there are no obvious borderlines between such an Area and the Arts Area as at present conceived, and equally there can be no absolutely clear border-line between the Social and Natural Sciences. But is it possible to suggest two criteria which give some clue to possible boundary lines.

BORDER

On the Arts side the border is marked by Mathematics in the broadest sense - the use of and training in quantitative ideas. On the other side the borderline between Social and Natural Science is suggested by the freedom to mount experiments and the kind of statistical inference needed to interpret experiments which the variables are not fully under the experimenter's control. This criterion leaves Physics and Chemistry clearly in the Science Area: conceivably Human Biology comes on the Social Science side of the divide whereas some other interests of the present School of Biological Sciences are on the other side. Perhaps this suggested method of drawing the line may be seen to throw light on the articles by Professors Elkins and Rivett. Professor Elkins is clearly concerned with a School involving those Science subjects which have a claim for inclusion, under my criterion, on the Social Science side, Professor Rivett however was too modest to make the claim which I think interesting and worth discussing very much further, that Operational Research should be the Queen of the Social Sciences.

It if is agreed that extra Schools are needed it is not obvious that the creation of such Schools de novo is necessarily the best way to produce them. It could be argued that fragmentation of existing Schools could provide viable new Schools much more efficiently and easily, and indeed the comparatively easy birth of the School of Molecular Sciences (the only School so far founded in this way) strongly supports this view. We have already had a proposal for fragmentation of European Studies, MAPS is already rather large, and there may well be other Schools already ripe for fission.
or which will become so as we increase our numbers. Of course splitting of old Schools would not so easily give the same intellectual ferment as a brand new School, and perhaps the right thing is to have some new creations and some fragmentations. After all, we don't want too high a proportion of yeast in the dough - a little produces a great effect - and the Vice-Chancellor's warning that "elements of 'leaven' and 'balance' need to be taken into account" is highly relevant here.

However, the multiplication of Schools, with or without the introduction of a new Area, raises serious problems going beyond the mere increase of administrative complexity which I mentioned earlier. In order to make administration possible at all, there may well have to be a transfer of power to make decisions (rather than initiate proposals) from the Schools to the Areas and it would be foolish not to consider the possible effects of this on the character of Schools as they have so far been depicted in the Sussex tradition. We may find that, by reducing the status of the Schools through inevitable administrative processes, we lose much of what we had hoped to gain by replacing (except for Chemistry) the Departmental concept by that of the Schools of Studies. And it may be salutary to remind ourselves that the Departmental system was not adopted by older Universities merely through spiritual stubbornness and ancient prejudice against the new revelation. The plain fact of the matter is that the Departmental system is the natural equilibrium position of a University under the Principle of Least Action.

**ACTION**

If, as we have decided, we want a different equilibrium position then we have to inject a great deal of action into the University machinery to balance it. All I am asking now is that we look hard and honestly at the possible future demand for this kind of action and are absolutely clear, before we proceed, that we do not anticipate having notably to increase the action while at the same time sensibly decreasing the benefit we may expect to derive from it.

One of the most interesting problems we have to consider is that of what the Vice-Chancellor has frequently described as "straddling Subjects" of which perhaps History, Mathematics and Philosophy are the most notable, and presumably nobody imagines that these problems would be eased by increasing the number of Schools to be straddled. If, as I feel, we have not yet mastered the problem of straddling subjects it is not clear that we have acquired the necessary expertise to go on to create more straddling Schools. We might cut the Gordian knot by using some of the straddling subjects as bases for such Schools. But in any case the problem of straddling subjects needs a lot of hard thought, and there are very great disadvantages in the present post-McIvy arrangement of subjecting some such subjects to a single Dean. This is nicely illustrated by the recent misunderstanding between the Schools of Molecular and Biological Sciences over Biochemistry. Because Biochemistry as a subject has been placed in it, the Biological School as such had thought that it had the duty to dictate to Molecular Sciences over a major subject in that School, instead of leaving it to the Biochemistry subject group to arrange things. This particular conflict involving a subject straddling only two Schools has now been happily resolved but it does highlight the problem of a subject group, subordinate to a single Dean, and yet having to work in five Schools. And if the number of Schools is increased the problem will get no easier.

Perhaps after all these depressing generalisations I may now follow the Vice-Chancellor's example and conclude with some comment on the particular problems of the School of Educational Studies. It is only fair to remember (especially as the majority of our colleagues may have come too late on the scene to appreciate it) that apart from the change of name, the way the School has gone has been largely determined by the limitations placed on its activities at the beginning. In particular by the desire to cater for prospective social workers in general and for particular occupational groups who, as it turned out, have not been forthcoming (though the Vice-Chancellor's activities in the field of nursing Education could perhaps remedy this.) If the position of Education in Sussex is to be completely re-considered I would hope that this should be done on the basis of what has been achieved with the Sussex School of Education, which includes the Teacher Training Colleges. We might, for instance, ask whether we have possibly encouraged the Colleges to some extent to feel that affirmation of faith in child-centrness and other important educational concepts is an adequate substitute for addressing themselves to questions of more technical import, and in particular to the two vital problems of teaching their pupils to learn and of learning them to teach. We ought to ask whether the Sussex School of Education has helped the Colleges to reach higher standards or not.

**BELIEF**

One hopes that any future decisions on the position of Education in the University will start from a firm belief that it is a matter of great national importance to put teachers into the country's schools who will do a good job when they get there. And one also hopes that we will above all remember that there is no point in creating a privileged class of educationalists, educational technologists, or socio-economic educational experts who, in the last resort, are carried on the backs of the practising teachers, in a situation where we cannot even afford to pay the teachers properly. Of course, all these experts are important (in reasonably small numbers and provided they are really of high enough quality) but we shall deceive ourselves if we imagine that we can embark on the large-scale production of such persons (especially at the undergraduate level) without damaging the prospects of getting the necessary teachers in the classrooms. Thus the Vice-Chancellor's interesting, and unfortunately too brief, sketch of some avenues open to Education in Sussex merely suggests a possible framework for the research interests of some faculty who may be drawn in - we still have to consider in far more detail the rationale and nature of an undergraduate School. And I personally hope very much that we shall not again be deluded into thinking that any other branch of Education can exceed in importance the capacity of the teacher to communicate in an interesting and exciting way significant and useful knowledge.
Kurt Vonnegut is a good guy. His satire is biting, his humanity evident, his concern manifest. He was once a Scientist and is now a Survivor and in his books science is fearful and frightening. His world is the world in which Ice Nine can freeze life to a standstill, in which the power-display of the bombing of Dresden was only to be expected, in which scientific knowledge, like a pact with the Devil, embodies an insidious logic which turns the knowledge against the knowers. His advice to young people is to keep out of science. Kurt Vonnegut is a good guy.

And he is wrong. His heart is in the right place, but that alone does not qualify anyone to attempt to solve (or even to formulate) the dilemmas with which 'civilised' societies, through their own blindness and ignorance, have faced themselves. There can be no doubt that many, not to imply all, of the major problems facing the world now are intimately connected with the powerful force which science and technology constitute. These problems must be faced, formulated and fought if human life is to continue as anything other than an unstable system of competing units, a mass of neurotic isolated individuals unable to co-operate or communicate. But an anti-science lobby is the last thing we need in this situation.

Whether he appreciates it or not, the scientist today is an important man. Knowledge, and ideas in general, once born cannot be surely buried; scientific knowledge is no exception. Given this, the only possible course is to use what ideas we have wisely. For the scientist to reject all responsibility for the subsequent use to which scientific ideas are put is, in view of the massive amplification which technology and commerce impose upon them, no less than immoral. When ideas can affect all mankind, all mankind has a right to have a say in their application. In the use of scientific Ideas scientists must find a special voice, for the complexity and specialisation of modern institutionalised science make it inaccessible to outsiders; the watchdogs of humanity in the domain of science must themselves be scientists.

All of which you may say is very fine and rhetorical, but are scientists' eyes wide-enough open for them to act as watchdogs? And do they really have a voice? The answer to both is 'Yes and no.' If there is to be change in the way science is used the answer to both these questions must become 'Yes.' And I have already indicated that for me it seems that the question of the diversion of science for the good of Man rather than the profit of Mammon is a non-question - there is only one tenable answer. Here, then, comes the plug for which, I suspect, you have been waiting - the Sussex Society for Social Responsibility in Science exists to foster the development of both prerequisites for change - eyes to see with and a voice to speak with.
Admissions Report: 
too much secrecy over A-level grades

The 1969 Annual Report of the Admissions Office makes a plea for the provision, at a national level, of full information about the 'A' level grades demanded by University departments, and the number of vacancies they have, to assist applicants and their advisers.

"Ultimately if a candidate must choose five universities from amongst perhaps fifty or sixty which offer the subject he wants, anything the universities can do to provide him with the information he feels he needs must surely be done. And it seems to us that public institutions such as universities, should keep information secret only if their reasons for doing so are very good indeed. We do not believe that the reasons given are nearly powerful enough."

In a comprehensive statistical analysis of the University's applications and acceptances, the Report notes (Table 14) that in most subjects, at least half the intake had the equivalent to three B grades at 'A' level, and that considerably more than the national average, particularly amongst the girls, were from professional and managerial backgrounds. Commenting on this, the Report says that "It is conceivable that the 'trendy' image which Sussex, at least until recently, had, discourages girls from poorer families, who may feel that they would, in non-academic terms, be either misfits, or at least unable to compete effectively."

The Report also gives correlations between 'A' level and degree performance for four groups of students, and confirms the low correlations found at several other universities. The Report comments "Generally, we found 'A' level to be a poor predictor of degree classification," and "as a result we believe that the University's heavy reliance on 'A' level as an entry criterion is probably unjustified."

Noting a fall of 11% from the 1968 figure in applications to enter the University, the Report states that "for the first time since 1966, the University's share of the applicant market fell, and the University's share in Science fell for the first time ever. The Report notes that in Arts and Social Studies, "there were significant falls in some of the larger subjects, some of which could be the result of the effect, noted in the 1968 Annual Report, of pre-selection by applicants in some larger subjects, where it is notoriously difficult to obtain a place."

'TURN ON A SCIENTIST' 

The primary aim of SSSRS must be to raise the issue of social effects of science and the responsibility of scientists - the need to think out the problems and to take a stand. If you want a catchphrase to characterise SSSRS policy you could do worse than 'Turn on a scientist today.'

'Policy' seems to lead me into political questions. But these, though of great importance, cannot be the primary questions for SSSRS. SSSRS exists to cause scientists to recognise a responsibility to human society. SSSRS is opposed to dogmatism. Beyond this, SSSRS has no prior commitment - it is a framework providing channels of communication, sources of information and outlets for ideas and action. There is no need for commitment beyond this, as far as the society as a whole is concerned. Certainly the present social system and the way it uses science must be improved. But the problems facing would-be changers of society are too complex to admit of a solution by dogma. Study/action groups within SSSRS take the strength of political colour that their members give to them; the absence of prescribed political activity means also that there is no limit to such activity. But it is necessary for the fulfilment of the society's aims that the first commitment of its members is the improvement of the social existence of mankind and the use of science for the good of people, the development of a stable world-society.

It may have struck you that the title is ambiguous. By now it should be clear that the implication it carries is not 'turn against science.' but quite the opposite. Science and science-based activity provide the most powerful tools we have. Science is not evil; any evil that there is in science lies in its manipulation not in the knowledge itself. A character in Steinbeck's 'Grapes of Wrath' depicts the spirit that is needed: "I got to figure. We all got to figure. There's some way to stop this. It's not like lightning or earthquakes. We've got a bad thing made by men, and by God that's something we can change." Kurt Vonnegut may be right, and every scientific idea may end up as weaponry. But any reaction that turns its back on science is foolish in the extreme. If science is ever to do more solving of social problems and less causing of them it will only be because committed scientists have made it so.

SSSRS meets Thursday's, 8,30 at 17 Brunswick Place, Hove (top flat). Mike Hales is chairman (Logic Office, MAPS); Claire Williams is secretary (AAS 9-0-666). Since SSSRS attempts to be a flexible framework not a monolithic doctrine-based institution, the above interpretations cannot be those of 'the society'; they are those of the author. If your views diverge - or concurr - on this (important) matter, don't just sit there - stand up and say so.
Two major issues, those of discipline and free speech, were discussed by the University Senate at its meeting on March 18th. Fresh in the minds of members of Senate were a number of incidents which had occurred during the Spring Term.

On February 16th the Kingsley Martin Memorial Lecture, given in the Chemistry Lecture Theatre by the Indian High Commissioner, Mr. A. Pant had been seriously disrupted by demonstrators.

On March 5th there had been an afternoon sit-in in Essex House and was followed that evening by a demonstration during the opening minutes of a lecture, again in the Chemistry Lecture Theatre, given by the Vice-Chancellor under the auspices of the Centre for Continuing Education. And finally there were the implications of the Union's decision not to permit one of its affiliated societies - the Conservative Association to invite Mr. Patrick Wall M.P. to speak at a meeting on the campus.

As far as the Kingsley Martin Memorial Lecture was concerned the Chairman of theDisciplinary Committee, Dr. J. Rosselli, reported that the disturbance had been carried out by those in the audience who were not members of the University. It had therefore proved impossible to take any action under the disciplinary scheme; nor were there any indications that the police would be willing to intervene in the kind of situation that had arisen on February 16th. The only way of dealing with the kind of situation that arose at this lecture - and then it would not be a satisfactory one - would be through some kind of 'University Police Force', something that few would consider desirable.

INCIDENTS

The Senior Proctor, Dr. M. Ford-Smith, reported the results of the consideration he and his three fellow-proctors had given to incidents arising out of the Essex House sit-in and the interruption at the beginning of the Continuing Education Centenary Lecture given by the Vice-Chancellor.

Following the sit-in damage to doors etc in Essex House - several of which had been kicked-in - had been discovered and damage was estimated at £100 to £150. The Senior Proctor reported that no action had been taken in relation to particular individuals. In such cases there are always difficulties in relation to identification.

The Senior Proctor then turned to the events of the evening. (Some 400 students were present in the Chemistry Lecture Theatre where the Vice-Chancellor was to give the Centre for Continuing Education lecture on 'The 1870 Education Act'. There were demands that he should first answer questions on student files. The Vice-Chancellor stated at the outset that he would talk about files 'as long as anyone liked' but only after he had delivered his lecture which a considerable number of guests from outside the University had come to hear and which was in no sense concerned with the topic of grievance. The start of the lecture was delayed for some ten minutes. It was then heard in comparative calm, and was followed, as promised by a long and open discussion on files.)

The Senior Proctor told the Senate that although a prima facie breach of discipline had been committed by two students whose identities were known the Proctors had unanimously agreed to take no action because:

(a) The disruption had not prevented the lecture from being given;
(b) The lecture was not part of the University's regular undergraduate or graduate teaching programme;
(c) The Proctors had taken into account the general situation within the University at the time and the strong feelings in this and other universities about the files issue and (d) the Chairman had stated at the outset that the Vice-Chancellor would discuss the files issue at the end of the formal proceedings.

PRECEDENT

Nevertheless he wished to emphasise that no member of the University would be justified in viewing the Proctors' action in this case as constituting in any sense a precedent for the future.

Members of Senate expressed their confidence in the decision of the Proctors. Nevertheless there was a great deal of concern and disquiet.

Had the University been sufficiently firm? And was there perhaps not a feeling that some students were getting away with it? The Vice-Chancellor said he shared the Senate's strong conviction that the University's academic life must never be impaired - it was at this point, indeed, that the University must always be true to its fundamental purpose. As far as the interruptions at his lecture were concerned he recognised the mood of that particular day, but was concerned that he had not been asked to speak on the files question before the interruptions were planned for his public lecture.

He had stressed to students at his lecture first, that he was perfectly willing to talk about files and second, the effects of their behaviour on the many non-members of the University present, most of them local people interested in education, and on public opinion in general. He also explained why he had not intervened in the Patrick Wall case.

Dealing more generally with the question of freedom of speech in political matters, he said that it was imperative that, despite the many complex problems involved, means must be devised whereby certainly in an election period different and opposing points of view could be freely expressed at Sussex. He hoped that given the possibilities at Sussex of discussing matters jointly on all important policy issues full use could be made of the existing procedures to deal with all contentious issues inside the University.

From the floor it was pointed out by one speaker that, in his view, the type of behaviour in question was not just lacking in good sense but totally and fundamentally wrong. Continual vigilance had to be exercised if the concept of civil liberty was to be preserved. An
EDUCATIONAL INSTITUTION OUGHT TO BE PREPARED TO GO LITERALLY TO ANY LENGTHS TO UPHOLD IT.

A SUGGESTION THAT THERE SHOULD BE WIDESPREAD DISCUSSION WITHIN THE UNIVERSITY IN WHICH THESE PROBLEMS MIGHT BE FULLY ARISED AND THROUGH WHICH A SOLUTION MIGHT BE ARRIVED AT BY MAKING USE OF THE VARIOUS CONSTITUTIONAL PROCEDURES THAT ALREADY EXISTED WAS ACCEPTED BY THE SENATE. IT WAS AGREED BY AN OVERWHELMING MAJORITY THAT:

THE SENATE VIEWS WITH EXTREME SERIOUSNESS THE ISSUES OF FREEDOM OF SPEECH IN THE UNIVERSITY AND IS SETTING DISCUSSIONS IN MOTION AT ALL LEVELS IN ORDER TO MAKE THOSE ISSUES MORE WIDELY AND CLEARLY UNDERSTOOD.

PHILATELIC UNIT FOR SUSSEX

Mr. Reginald M. Phillips of Brighton, Founder of the National Postal Museum and Fellow of the Royal Philatelic Society has presented to the University of Sussex, of which he is Honorary Curator of Philately, a collection of 46 albums of colour photographs of the 19th-century postage stamps of Great Britain which are housed in the Museum in London. The University will display this unique collection in a Phillips Room, to form part of the next stage of the Library, and the volumes, which provide the most comprehensive reference collection of the 19th-century postage stamps of Great Britain in the world, will be available to students for study and research. The Phillips Room will be the centre of a Philatelic Unit under the direction of Professor John West, the Pro Vice-Chancellor. This Unit will promote four main lines of development:—

(a) the Room, and through it, the University, will be a centre for small national or international conferences of philatelic experts;
(b) there will be close links with universities, schools and other educational institutions in which there is an interest in philately;
(c) the role of philately as a hobby within the changing pattern of leisure will be studied in conjunction with the University's Science Policy Unit under the direction of the Phillips Professor of Science Policy; and
(d) work on 19th-century British Postage Stamps will be associated with historical work on Victorian England, particularly the history of art, design and economic and social life.

PHILATELIC UNIT FOR SUSSEX cont

From the "Times Diary"........

Tom Harrison, the celebrated anthropologist, who over 30 years ago founded Mass Observation — the first of the now prolific organisations for discovering and tabulating public opinion — is to spend three years at the University of Sussex sorting through all the material he collected during the 12 years he ran the organisation. The University has been fortunate in obtaining the material, which will obviously be of enormous value to future social historians. It includes notes and studies collected during four pre-war years in Bolton, where Harrison made a very detailed study of religious and political attitudes, and other aspects of daily life. There are the notes on anti-Semitism in the East End, which he collected early in 1939; and the results of the many mass observation studies which took place until he left the firm in 1949, and it became a more or less conventional market research organisation.

The cranes of material include, fascinatingly, day-to-day diaries kept during the war by over 100 people in various walks of life. "We used to send them presents, and keep in constant touch with them," says Harrison, who is 58. "It was quite difficult to keep them going." Among those who did keep going was the novelist, Naomi Mitchison, who kept her diary over many years in neat typescript, sometimes running to 2,000 words a day.

Harrison, after 20 years abroad (in Sarawak and at Cornell University), has come back to set the material in order, and also to preside over the first years of what will be a continuing preoccupation, at Sussex, with the documentation of everyday life.

LECTURE

The next University Lecture is at 5.45 p.m. on May 26th in the Chemistry Lecture Theatre, and it is by Mr. L. F. Neal, who is in charge of labour relations for the British Railways Board. The title is "Trade Unions and the Law". Topics he will deal with include:

(1) The place of the U.K. voluntary system;
(2) The effectiveness of that system against the background of changing social and economic conditions;
(3) The relevance of the Law to the growth of Trade Unions and collective bargaining;
(4) The case for reform.

NEW CHAIRS

The following appointments to Chairs are announced:—

Reginald M. Phillips Chair of Science Policy
Christopher J. Freeman, B.Sc. Econ., at present Director of Science Policy Research at the University of Sussex.
Chair of Educational Psychology
H. J. Butcher, B.A. (Canter), at present Professor of Higher Education, University of Manchester.
Chair of Philosophy
R. Edgeley, B.A. (Manchester) B.Phil. (Oxford), at present Senior Lecturer in Philosophy, University of Bristol.