

Lost Opportunities in the Arts and Social Sciences

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This paper discusses the implications of the recent UGC initiative on "Planning for the late 1980's" for the Arts and Social Sciences. Its aims were essentially (a) to allocate recurrent grants for 1986/87, (b) to recommend student numbers to 1989/90 and (c) to provide a framework for intra-university resource allocation. Such policy making must be informed and the UGC initiative attempts to bring an informed approach to University planning. As a statistician, I can only applaud these motives for, as the first president of the Royal Statistical Society, William Farr said: "Man's course is determined by opinion; and opinion uninformed by science is full of delusions, wayward, and prone to exaggeration".

It is likely that everyone here today will agree with these sentiments but unfortunately the reality is somewhat different. Increasingly policy reflects the political climate and the information on which it is based is flawed or misinterpreted. For example, the DHSS team of the Rayner Review of the Statistical Service said in 1981 that: "In the last analysis, policy is made on the basis of politics, not on the basis of figures".

My comments are largely directed at the results of the UGC initiative as the full implications for the University system as a whole as well as for the Arts and Social Sciences in particular will not be known until later in the year as the universities themselves conclude their own planning exercises. I will start with the initiative itself and then consider more closely the "Lost Opportunities" for three groups - Subjects, Staff and Students.

At the outset let me make two caveats. First, I am not about to argue against the philosophy of grading either departments or staff. I believe that to do so is to set double standards for one of our major roles is to grade our students. We should not shy away from the prospect ourselves. However, any such grading must be based on declared criteria and must be undertaken so as to minimise the measurement error in the results. I shall argue later that this is not the case in the current exercise.

Second, I do not believe that universities and their departments should act in isolation from the national requirements. Our graduates must be employable, their education must reflect changes both in our society and in its technology, and there must be efficient planning in the allocation of resources to the universities.

With these caveats let us look at the UGC initiative. Its aims have already been stated yet the goals regularly demanded by the policy makers at other times are largely inconsistent with these aims. Any successful industry would not base its planning on a piecemeal year to year basis but on a sound long term strategy. We cannot be expected to plan the future of Higher Education in this country on such a piecemeal basis. The achievement of national goals requires more than just one or four year plans. With a knowledge of long term funding the universities and their constituent parts especially the Arts and Social Sciences would be able to produce a sensible agenda for development into the twenty first century which would permit the fulfilment of national goals through our remaining at the forefront of world developments in our subjects.

To consider the UGC initiative one of the main concepts was the "research gradings". Let us compare the UGC approach with the usual methods of student grading in Higher Education. When we grade our students we do so on the basis of a long established practice which has evolved so as to minimise the possibility of measurement error. Such practice involves defining a set of topics on which the students are to be assessed - a syllabus; establishing the method of assessment which best measures a student's performance in a particular course; obtaining a portfolio of marks for each student across a range of topics; marking twice to improve reliability; standardising marks to control for variability in the assessment of two courses and moderating the whole exercise through the use of an external examiner.

The UGC exercise would probably not have been accepted by the Academic Committee within my own faculty for it would have failed at each of the above steps. I do not mean to criticise in any way those who undertook to perform the grading - I am sure they did their best to maximise the precision of the grading on the basis of the information available. Nor can I be said to be complaining of my own treatment for I come from a starred department. However, this exercise has been characterised by a plethora of potential measurement errors. Departments were not asked for a common set of performance indicators nor were they told the full grounds on which the assessment was to be based. It is not clear whether the grading was left solely to the individual assessor or whether there was an agreement of criteria across subjects. If so, how were these criteria established between say History and Archaeology? Within each department there was no explicit call for information on each member of staff, their research interests and achievements. The graders here had an almost impossible task. I would not claim to know even the identity of every academic statistician in this country let alone their standing particularly if their field of application is outwith my own. This last problem has led to potential errors in the grading of departments which are largely applied in nature. A psychologist with an international reputation in environmental annoyance, research, say, may not be as well known to a developmental psychologist as a lesser "theoretician". Such examples are numerous. The cries of "unfair" which followed the gradings should be directed at those who called for them with little thought as to their execution. I always tell my students that when one designs a research study it is important to consider both the analysis and the implications of the results. We have already established that the former was not considered. It was also of little use to state subsequently that the gradings should not be considered as "league tables". Clearly they would be considered so by both public and industry and that "starred" departments would receive preferential treatment within their own universities. To not have expected such consequences is at best naive. I reiterate that I am very much in favour of assessment, both of departments and individual members of staff but such assessment must be based on established scientific criteria. The recent exercise was not.

Let me now turn to the first of my three areas of lost opportunity - subjects. What have been the implications of the exercise for the Arts and Social Sciences? Of the 37 cost centres I shall include seven in this analysis. Four of them - psychology, geography, business and management studies and accountancy are essentially "one subject" cost centres whereas the other three - Other Social Studies, Language based studies and the Humanities are large "catch all" groups of subjects which will vary both in size, number and direction as well as between universities.

I have undertaken a number of analyses of the UGC gradings. First to estimate the proportions of each cost centre graded from outstanding through to below average. This analysis is based on the UGC letters together with the calendars of each university. Table 1 shows these distributions for the seven groups mentioned above together with some other cost centres for comparison. There is little similarity between the distributions for each cost centre. One cannot compare the distributions of cost centres as the basis is a within subject assessment but as a definition of outstanding is "world class" there is a little justification for comparing the proportion of departments rated outstanding. Here there is little support for Sir Peter Swinnerton-Dyer's often stated opinion that the social sciences have let the country down - as young departments, developing and expanding recently they appear to have done rather well to have established themselves on the world stage. I would also like to draw your attention to the distributions of computer science, chemistry, accountancy and education where the modal category is clearly below average - this might prompt questions of the measuring instrument as well as the standard of the departments.

Table 1 : Distributions of Cost Centres by
UGC Research Grading

	%	Starred	Above Average	Average	Below Average	Number
Psychology	23	10	37	30	40	
Geography	28	11	38	23	36	
Business & Management	8	36	15	41	30	
Accountancy	10	11	21	58	19	
Other Social Studies	23	28	35	14	50	
Language Based Studies	21	16	57	6	50	
Humanities	24	20	49	7	46	
Chemistry	10	22	27	41	52	
Computer Science	12	17	25	46	52	
Education	13	26	16	45	38	

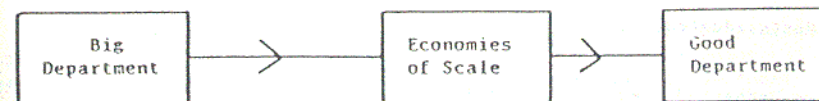
Let us now look within subject grouping. There have been careful analyses of groups by other interest groups, for example the Professors of Politics, whose report I commend. I would like to consider the size of the department as a predictor of its grading. Within each subject grouping larger departments (those in the upper quartile) are significantly more likely to be graded above average or outstanding than those in the lower quartile. Does this demonstrate that big is good? As a statistician I cannot tell. To me there are a number of possible causal narratives (Table 2). The first model proposes that large departments are better because of economies of scale, better provision for research etc. The second illustrates a situation where the measuring instrument is faulty and big departments are perceived better by the "grader" because they will produce more research as a group (though not necessarily per member of staff) and have a better chance of having outstanding individuals e.g. two professors. I personally would prefer the third model which requires a weighting by size of department. I cannot say that this was not done but all the evidence suggests the second model. Without full information on the assessment criteria it is not possible to identify the true model.

The UGC letter - Annexe C contains 13 commendations to universities for rationalisation in the arts and social sciences - typically the transfer of a small department in a language subject says Russian or Italian. There is not time to discuss such topics as the relative merits of students of all subjects having the opportunity to study other languages and cultures. However, I must stress the view of the Standing Conference expressed strongly at its last meeting in March that small departments in the arts and social sciences can be very efficient. There are many examples of very small departments producing outstanding work in the humanities - the reason is clear in that equipment requirements are much lower - often the provision of a few pencils and a micro computer as well as the Library - common to all disciplines. On the other hand, science subjects often require large departments to justify the relevant support. Implicitly the UGC letter supports this - a careful analysis of the financial projections can estimate weights for equipment grant allocations (Table 3). Hence, as a number of universities are now finding - rationalisation and closing down small arts departments is not likely to produce sweeping savings.

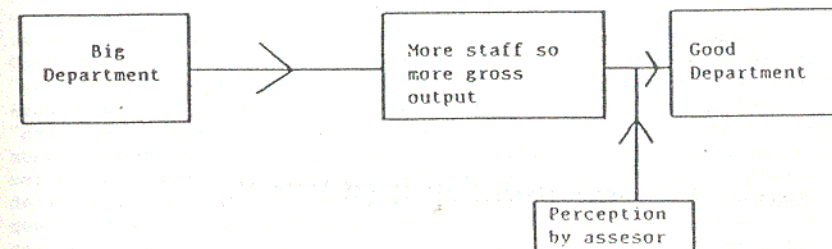
Before I move on to talk about lost opportunities for staff themselves let me talk about the impact on the arts and social sciences of the decline in numbers of staff as a result of the 1981 cutbacks and the resulting voluntary severance schemes. It has often been stated that these led to a disproportionate loss of staff in science and technology who were readily employable outside academia. The data do not support such surmise (Table 4). The first column shows there is little difference in the decline in university funded positions across subject groupings. If one considers the increases in positions in accountancy and management studies in the past few years then the position for social studies is even worse. It should also be added that the position described here is very probably a conservative one - severance schemes directed at older members of staff in the past two years have affected the arts and social sciences disproportionately.

If we turn to the column for all academic staff, that is research as well as teaching, we see a predictable but very worrying trend. The arts and social sciences are less able to compensate this decline in UGC posts through "soft money". This is often due to the nature of research in these areas which do not, for example, require large numbers of research assistants. However, the attendant increase in administration and teaching felt by all members of academic staff in the past few years leads to a disproportionate decline in research time in the arts and social sciences - presumably spiralling with a lower research grading and hence less funds in the future.

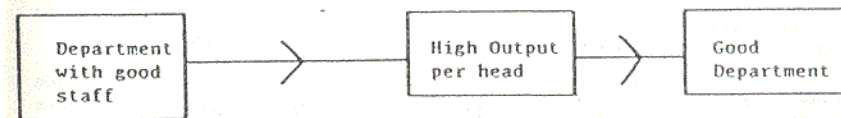
Table 2 : Are Big Departments Better?



Model 1



Model 2



Model 3

Table 3 : Estimate of Weights for Equipment
Support Grant used in UGC Allocations

Arts Undergraduates	1.0
Arts Postgraduates	1.5
Science Undergraduates	3.3
Science Postgraduates	16.5

Table 4: Full-time Academic Staff (Great Britain)

	ALL		UNIVERSITY FUNDED	
	1980/1	1983/4	1980/1	1983/4
Education	2013	1876	1590	1373
Medicine, Dentistry & Health	8160	8515	5361	4783
Engineering & Technology	5767	5929	4170	3775
Agriculture, etc.	1055	1000	768	696
Biological & Physical Sciences	11460	11333	8333	7616
Social Studies	7362	6833	6273	5732
Architecture, etc.	734	656	575	503
Language & Literature	3822	3449	3740	3336
Other Arts	2587	2415	2484	2269

So what are the lost opportunities for subjects in the Arts and Social Sciences? They may be summarised briefly as an increasing difficulty to remain at the forefront of world developments in these subjects. At a time when the United Kingdom's reputation in the Arts and Social Sciences is high this seems both a short sighted and uneconomic policy.

Let me turn to lost opportunities for staff in the Arts and Social Sciences. I do not propose to dwell on the major loss of morale I have seen develop throughout university staff in my short period as a university lecturer nor on the lack of promotion possibilities. Instead I would like to address two problems. First the attraction of new staff. It is often proposed that the problems experienced by my colleagues in Computing Science and Electronics in attracting new staff would be solved "at a stroke" by differential salaries. In my own department, it would mean my Actuarial colleague being paid more than anyone else. This "solution" is again short sighted and would solve nothing. While in the short term we cannot attract Computer Scientists, in the long term we are not training the future generations of historians and social scientists - declines in the numbers of postgraduate grants and the paucity of well qualified undergraduates prepared to undertake an academic career will result in a dearth of applicants in the future - these graduates will become the managers and captains of industry and so will not be qualified to be tempted back by differential salaries.

Second the decline in research money means that young academics do not get the chance to undertake the fundamental research that is both stimulating to them and potentially exciting for the nation as a whole. In times of very scarce resources who can blame the research councils for backing the established "stars" rather than the potentially exciting but risky newcomer.

Lost opportunities for staff are, therefore, also lost opportunities for subjects to some extent. We will now see that this is also true of lost opportunities for students. Let me start this part of my talk with a statistic. Two hundred and fifty thousand is a large number but it is also a reasonable estimate of the number of young people who have not had the chance to attend university as a result of the Government's 1981 decision to freeze the number of places at their current levels.

The student numbers issue has received wide attention yet I am constantly amazed to read that there will be a large decline in the demand from students for places in Higher Education. All serious commentators now agree that the decline in demand as a result of the decline in fertility will be very low largely as a result of changes in the social structure of modern Britain and of increases in the demand from mature students and women. The demand will increase again in the late 1990s. Sir Peter's letter to the Vice Chancellors regrets that numbers will be unable to reach the levels suggested by DES projections. As these forecasts are, if anything, too low the full extent of the lack of funding is exposed. I must agree wholeheartedly with Sir Peter when he writes that the UGC together with other bodies in Higher Education told the Government: "in our view the needs of industry, commerce and the public services for highly trained and qualified manpower required more than merely the maintenance of the present number of entrants to higher education."

How will this affect students of the Arts and Social Sciences? There is no doubt that they will find it harder to gain places than their science counterparts as the increases in demand from women will tend to be in these areas and as problems in recruiting and keeping schoolteachers in science and mathematics lead to talented schoolchildren being attracted away from science and technology.

We are told that we must train students to meet the national need - and that this is not in the Arts and Social Sciences, with the exception of commerce. However, there is every evidence that well trained students for the arts and social sciences are in high demand. We were constantly told this last year by our industrial colleagues at the SCASSU Conference in Dundee on 'The Arts Graduate and Society'. It must finally dawn on the policy makers that arts and social science graduates are, by and large, ideally trained to enter industry and commerce. If they require further training then they are often prepared to work tremendously hard to gain the skills relevant to the prosecution of a particular area. Let me finish with a case study of one of my own students - a mature lady who left school at 15, married had two children, had a number of jobs and who at the age of 37 took a 'Return to Study' course, ending up some years later with the best degree in her year in Sociology. During this period she became interested in the quantitative side of her subject and so took a part-time job for a year while she learnt sufficient mathematics of undertake a Masters in Statistics. She is about to start. In the future, she will be ideally qualified for a position as a statistician in industry or Government. She would never have dreamt of becoming a statistician in the first place. There are probably many people here who could recount such a case study. It is clear that the increasing constraints on places and subjects in the arts and social sciences will preclude such students.

For students then, the lost opportunities are those to gain a place in higher education to study the subject of their choice, and to develop skills leading to the full promotion and development in their skills.