

Medical education, training and research

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'We present this Report in a period of economic difficulties when Britain can ill afford additional expenditure. [Nevertheless]... good medical care is one of the foundations of civilised living and without an adequate system of medical education it cannot be assured. We have recommended no more than that which we believe is necessary to ensure that medical education in Britain will keep abreast of progress and that it will provide in adequate numbers the doctors Britain needs to maintain in the future a standard of medical care appropriate to our society.'

Royal Commission on Medical Education, 1968, para. 570.

Organization, administration and financing

The *Royal Commission on Medical Education* ('*The Todd Report*'), published in 1968, provided an overview and prospect for medical education and training, following in the footsteps of the earlier report of the *Goodenough Committee*. Since 1968 there has been no comprehensive attempt to consider jointly medical needs, higher education policy and the particular needs of medical education, training and research.

Organization of medical education is very much left to individual medical schools, and is overseen by the General Medical Council, which has statutory powers concerning training and professional registration. Through its Education Committee it has been responsible for a number of reports and surveys (e.g. General Medical Council, 1977, 1987a) which have documented medical training, at regular intervals. Additionally it has produced its *Recommendations as to Basic Medical Education* (most recently in 1980, previously in 1957 and 1967), and its *Recommendations on General Clinical Training* (General Medical Council, 1987b); although worthy, their recommendations are often not implemented, in part because of the GMC's infrequent and far from searching inspections of schools. The situation in four specialities resulted in a special report in 1987 (General Medical Council, 1987c), although little has changed as a result. Lack of financial resources ultimately means that the GMC cannot implement even those changes recommended by its own Education Committee.

Financial control of medical schools is principally through the University Funding Council (UFC), (previously the University Grants Committee, UGC), which distributes money received from the Department of Education and Science (DES), allocating it to universities and medical schools according to its perceived priorities. The department supplying funding (the DES) is therefore remote from the eventual major employer of doctors, the Department of Health (DH). Although the DH would like more involvement in medical education, it at present has little influence and no financial control. Medical education research is in a similarly anomalous position. To the DES medical education is only a small proportion of higher education and a lack of

insight into its special needs and requirements precludes research funding; the DH understands its problems but has few funds for medical education research, typically only for research into the careers of qualified doctors, and hence within its legitimate remit of manpower planning. The research councils are similarly split. Despite its name, the Medical Research Council (MRC) does not fund research into the training, careers and practice of doctors, seeing its role as research into disease aetiology, treatment and prevention. The council notionally responsible for funding is the Economic and Social Research Council (ESRC; previously the Social Science Research Council (SSRC) until they were required to remove 'science' from their name). Medical education research represents only a tiny part of the ESRC's remit, and again there is little specialist awareness of its particular needs. The medical charities do not usually fund medical education research, and it therefore has to compete for funding within charities (such as the Leverhulme Trust) which are committed to broader research objectives including education or social studies. Research nevertheless *is* being carried out in the UK, much of it published in *Medical Education*, the journal of the Association for the Study of Medical Education (ASME); however an ASME survey suggested that funding was generally sporadic and haphazard (Grant, 1990).

Postgraduate or continuing medical education is hardly in a more satisfactory state than undergraduate medical education, with a single important exception. Within the past few years, and in response to the influential report *Achieving a Balance - Plan for Action* (Department of Health and Social Security, 1987) the Department of Health, the British Medical Association (BMA), the royal colleges, universities, research councils and other interested bodies, have come together on JPAC (the Joint Planning Advisory Committee), to order the numbers of doctors at different levels in the major hospital specialities. This should mean that in future there should be fewer 'log-jams' with well-qualified doctors unable to progress further along their careers due to a shortage of more senior posts, despite the large numbers of more junior posts needed to satisfy the requirements of the service. As a result there are now agreed

and published targets for senior registrar and consultant appointments within all of the hospital specialities (Anon 1989), and a much needed element of long-term planning has been restored into postgraduate medical training.

Nevertheless, postgraduate medical education has become fragmented and somewhat unsatisfactory, particularly in the hospital specialties. The dissatisfaction of doctors, especially in pre-registration posts, has been highlighted (McManus *et al.*, 1977; Biggs, 1989) and training schedules have been criticized (Select Committee on Science and Technology 1987, p. 336).

Progress is now being made in co-ordinating the service and training needs of junior posts, setting standards, ensuring their attainment and funding the costs. Different bodies are involved in this complex process. The training of pre-registration house officers is the responsibility of the university which awards the qualifying degree. The postgraduate dean regularly inspects the posts and the individual holder is assessed by their consultant or designated trainer. All doctors, whatever their ultimate specialty, after full registration undergo General Professional Training (GPT) in a wide variety of junior (Senior House Officer or Registrar) posts. The individual doctor can select a sequence of posts, sometimes linked in a formal training programme, relevant to their future training. These posts are regularly inspected, as are senior registrar posts which give specialty training. Teams of inspectors are nominated, for example, by the Joint Committees on Higher Medical or Surgical Training (JCHMT, JCHST). Inspectors carry the ultimate sanction of withdrawal of training approval for a post making it virtually unfillable by the employing authority.

On satisfactory completion of a training programme, the individual receives accreditation and becomes eligible to apply for consultant posts. This monitoring and audit is carried out by the various royal colleges representing the different specialties and sub-specialties. The colleges are largely responsible for setting standards, in conjunction with national and international specialist societies, who increasingly play a part in providing courses and training as well as advancing their specialties through conferences, promotion of research and publication of journals. Higher

examinations to obtain membership or fellowship of the appropriate royal college are part of the training programme and may either be by a peer reference entry examination, to select the best candidates for specialist training, or an exit examination, passed by most, on completion of training.

Obstacles in achieving these objectives have been the excessive junior doctor hours. They should have sufficient time to study, requiring a reduction in excessive hours of overtime working, and be provided with study leave and funding to attend courses, as well as gaining the necessary varied practical clinical experience. The financial responsibility for this lies with the NHS employer. From April 1991 regional postgraduate deans have an enhanced role with a defined budget to promote these activities in hospital. The revised GP contract of 1990 gives financial incentives for GPs to attend, and postgraduate centres to provide, similar courses and training. Through a system of college tutors in each health district representing the different specialties, junior doctors' progress is monitored with regular counselling and written reports.

To summarize, medical education and training, be it undergraduate or postgraduate, have been the subject of no major governmental study or initiative since 1968; its funding takes no note of its particular needs and makes little reference to its special relationship to the National Health Service; and research into medical training is seen as a marginal need by most of the bodies that might reasonably be expected to be interested in it. The impression overall is of a complex ship drifting without a pilot, its master and crew unsure of their itinerary, and its owners unwilling to direct them.

Medical schools

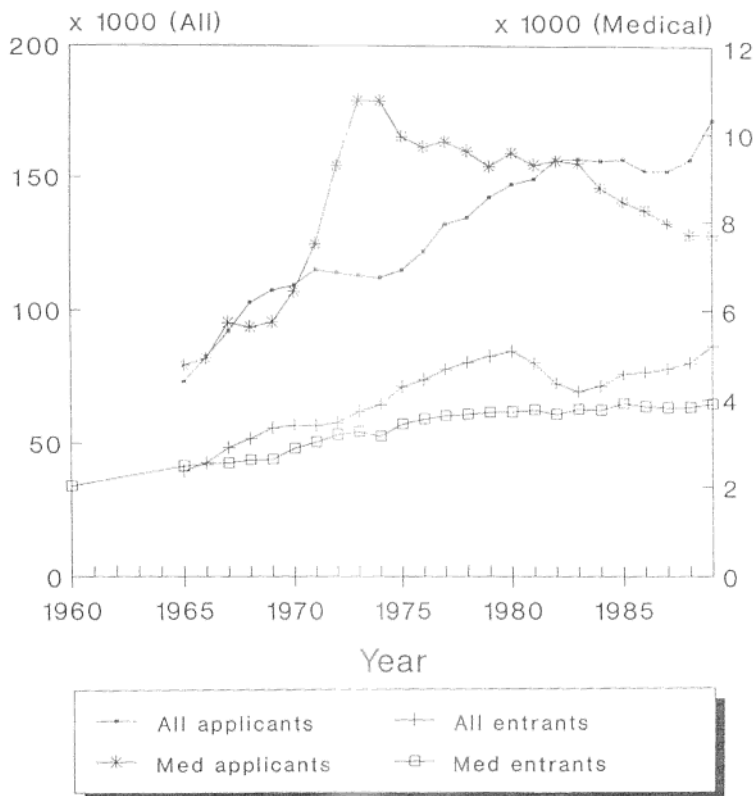
Within London, but not elsewhere, the 1980s have seen much institutional reorganization of medical education, motivated mostly by financial savings under economic constraints, rather than educational principle. As the decade began there still existed the twelve medical schools that had existed together for a century or more. The Todd Report

had suggested pairing into six schools; of the proposed mergers two actually occurred as suggested. Almost all medical schools in London have been involved in mergers, significantly reducing their number. Institutional changes in London may still not be complete, and rumour continues about one school or another being vulnerable to closure. Outside London, medical schools have shown neither mergers, closures nor openings for a decade.

Medical students

For 25 years the number of students entering medical school has climbed slowly, increasing steadily until 1985, followed by a near levelling out (Figure 7.1). Current home entrants to medical school, at about 3850 per annum, are much below the Todd report recommendations, of 3500 in 1970–4, 4300 in 1975–9, 4700 in 1980–84 and 5000 in 1985–9. The latter figure is indubitably unrealistic given the current capacity of the NHS to employ doctors, and throughout the 1970s and 1980s there were fears of over-production of doctors and substantial medical unemployment. That has not happened, but the result is that many doctors still work unacceptably long hours, often for 80, 100 or 120 hours per week, which might be better covered by more doctors working less hours. However, with a system, unchanged for a decade, in which over-time is paid at only 30% of basic rate, it is financially irresistible for health service managers to employ fewer doctors for longer.

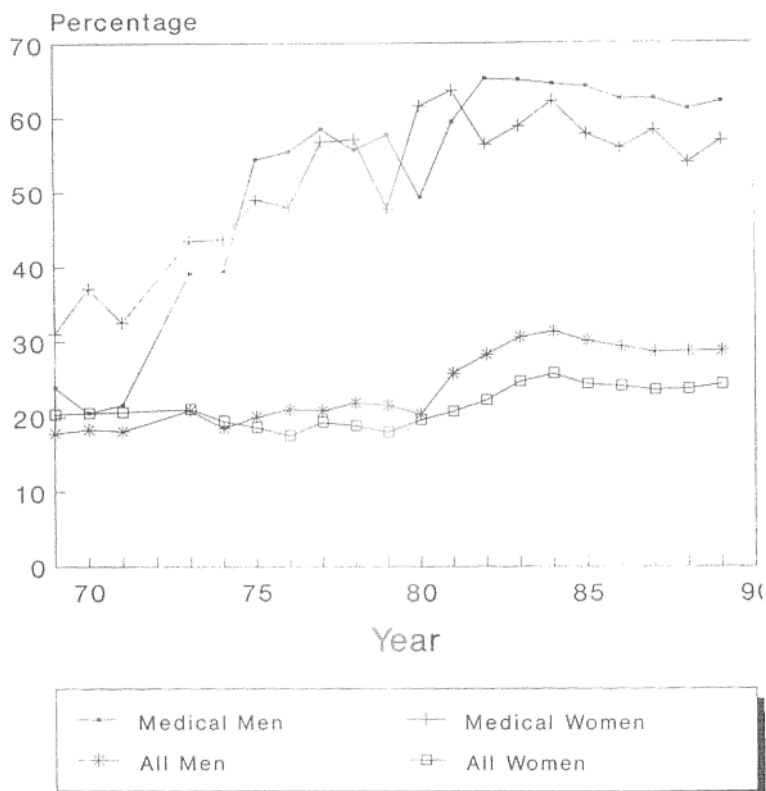
Entrants to medical school have risen more slowly than total entrants to university (Figure 7.1), and this has helped medicine retain its cachet as an academically exclusive subject (with A-levels secondary only to Veterinary Medicine). Such high A-level grades are a phenomenon of sudden onset in the early 1970s (Figure 7.2), prior to which medical students were not renowned for high academic qualifications. Analysis suggests that the rise in A-level grades was principally caused by allowing entry without A-level biology, thereby permitting selection from the far larger pool of applicants with A-levels in physics, chemistry and mathematics (McManus, 1982). Numbers of applicants to medical school therefore soared in the early 1970s, peaking



From 1965 to 1990 not all universities were a part of the UCCA scheme, and hence some growth in applications represents recruitment to the scheme rather than true growth. Numbers of acceptances are based on all universities, both those in and out of the UCCA scheme.

Figure 7.1 Number of applicants and acceptances to University and Medical School in the UK, 1960–90; UCCA (1965–89). Allen (1988) p. 2; Royal Commission on Medical Education (1968) p. 148.

in 1973–4, after which numbers slowly declined. From 1973 to 1981 there was a steady *rise* in entrants' A-level grades, suggesting that decreasing applications were due to the loss of the least well qualified applicants. Since 1981 that situation has changed. Numbers of applicants continue to decrease, increasingly so since 1983, but now there are signs



From 1989 the scoring system changed so that grades of A, B, C, D, E, at A-Level were scored as 10, 8, 6, 4 and 2, and grades of A, B, C, D, and E at AS level were scored as 5, 4, 3, 2, and 1. A score of 13 before 1989 is therefore equivalent to a score of 26 from 1989 onwards.

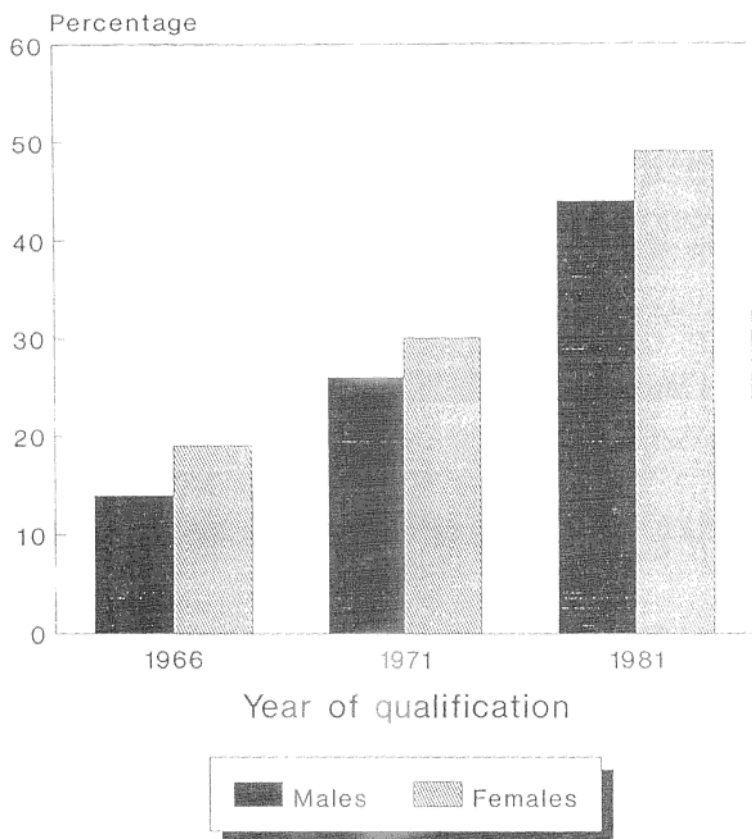
Figure 7.2 The proportion of all home entrants to medical school and to universities overall, in the UK having more than 13 points at A-Level (scoring A = 5, B = 4, C = 3, etc.), based on three A-Level subjects, or their equivalent in A-Levels. Source: UCCA (1965–89) Note; data not published for 1972; data for 1969–82 based on a 10% sample, and hence sampling error of observations is greater.

that the A-level grades of entrants are also declining. The slightly decreasing quality of medical entrants in the past decade must be seen against a background of a general overall increase in the A-level grades of university entrants, reflecting in part a scarcity of university places during 1980–

83 during which time numbers of applicants continued to rise, allowing universities to select better qualified entrants (Figure 7.2). Within a few years it seems that medical schools may well be unable to attract the well-qualified entrants they have become used to.

The declining popularity of medicine for well-qualified university applicants reflects, in part, the increasing dissatisfaction of doctors with working conditions (Figure 7.3), and their relatively well-publicized regret at having become doctors. More specifically it also reflects the adverse financial conditions for medical students. All university students have suffered cuts in support grant in real terms (Figure 7.4), coupled with increasing contributions from parental sources (which often are simply not paid by parents, thereby lessening the grant yet further). For medical students the problem is exacerbated by a 5 or 6 year course and by clinical years involving 48 weeks of teaching, and hence no vacations for employment to supplement the grant. The problem will become more acute if universities are forced to implement 'top up fees', i.e. additional teaching fees paid by students themselves. Top-up fees would almost certainly diminish further the numbers of well-qualified applicants, and additionally compromise the fragile finances of medical students. In recent years medical students' dependence upon overdrafts and bank loans has grown. Without private means it seems that financial disincentives can only make medicine less attractive to educationally well-qualified but financially less well-off applicants. The institution in 1990 of overdrafts ('student loans') as a part of funding will exacerbate the situation, particularly for groups such as mature students, for whom the proportion entering medical school has been unchanged for two decades (Figure 7.5), despite repeated government calls for increased 'access' to higher education. Repeated presentation of the arguments by the British Medical Association (BMA) on behalf of its student members has not altered the government's willingness to accept that the financing of medical students represents a special case.

In most medical schools the medical course lasts 5 years (typically two years pre-clinical, followed by three years of clinical). Additionally about one in five students intercalate



Doctors were from three groups which had qualified in 1966, 1976 and 1981. Doctors were interviewed during 1986 and 1987.

Figure 7.3 Percentage of British Medical Graduates who had 'ever regretted their decision to become doctors'. Source: Allen I (1988) p. 292.

an additional year between pre-clinical and clinical to study a basic medical science in depth to gain an intercalated degree, typically a BSc. Studies have suggested that the intercalated degree is an important step in training clinical research scientists (Evered *et al.*, 1987). Funding of intercalated degrees is not automatic and normally is not covered by local authority grants (except at Oxford and Cambridge).

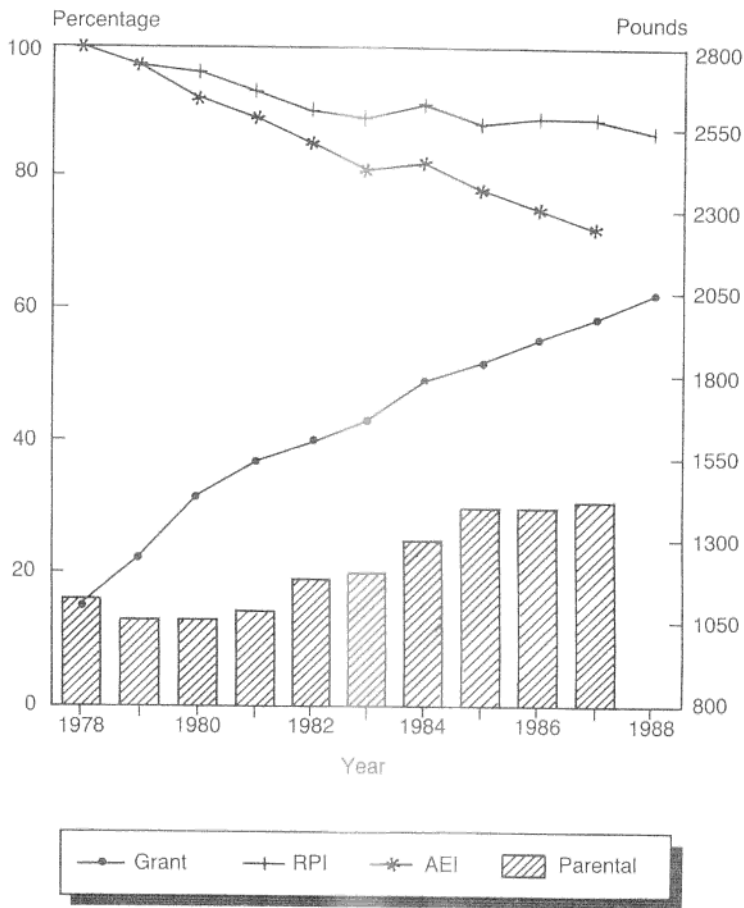


Figure 7.4 The size of the student support grant in pounds per annum; the student support grant expressed relative to the retail price index (RPI) and the average earnings index (AEI), the grant for 1978–9 being set at 100; and the average percentage of the grant being contributed by parents. Source: *Social Trends* (1990).

For many years the MRC funded most intercalated BSc students, seeing these awards as part of its training of medical researchers. However, in the early 1980s the Treasury informed the MRC that it could only finance medical research and not education; at present MRC grants are therefore being phased out. The result in England and

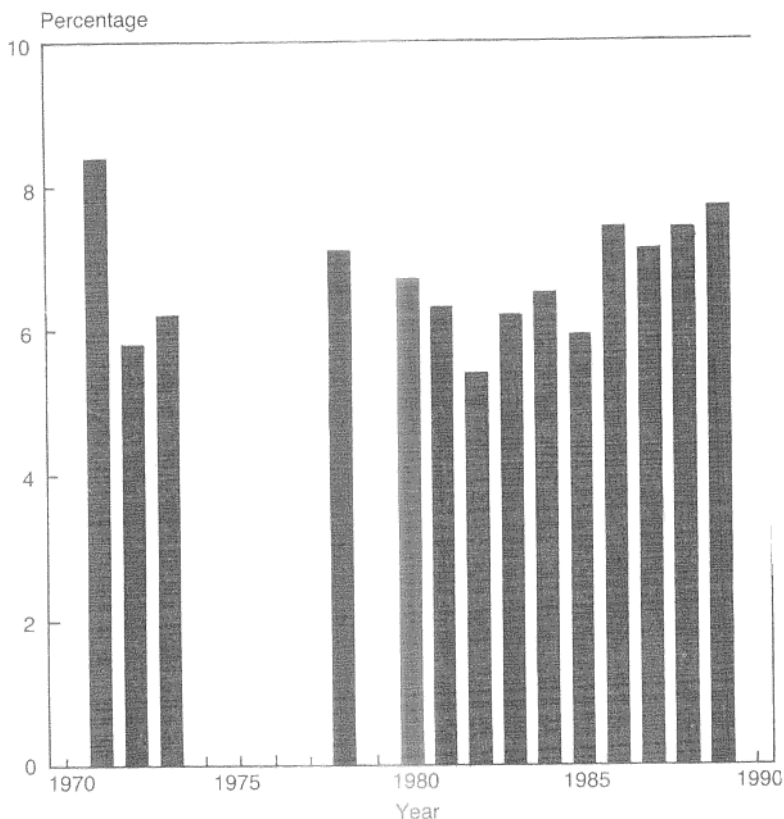


Figure 7.5 The proportion of mature entrants (over 21 years of age) to UK Medical Schools. Source: UCCA Statistical Supplements. Data not published for all years; data for 1971–3 based on a 10% sample.

Wales has been a growing proportion of students obliged to find alternative funding for intercalated degrees, typically funding themselves or relying on charity (Figure 7.6). Of note is that very few students are funded by industry, despite government exhortations to the private sector. Particularly intriguing is that the situation is entirely different in Scotland, where most students have been funded by the Scottish Education Department (SED); that has continued and few students depend on self-funding or charity. Treasury policy in England and Wales must therefore be seen not as part of any educational or other principle deter-

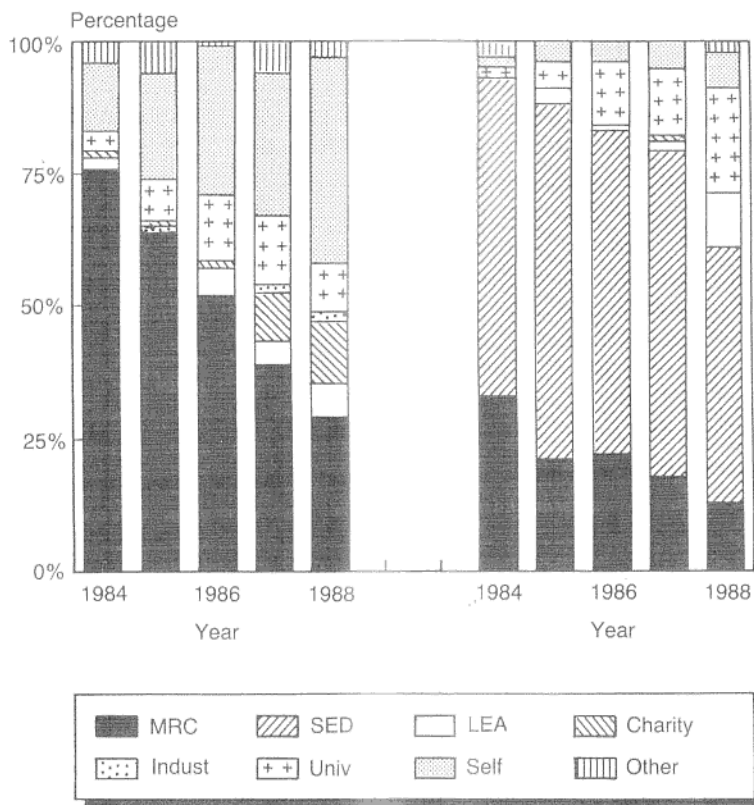


Figure 7.6 Sources of support for UK medical students taking intercalated degree courses. Source: British Medical Association (1990).

mined by government, but merely as an expedient for saving a small amount of money. Approximately 600 medical students continue to take intercalated degrees, partly because they appear to recognize its educational value and partly because the degree will help them obtain scarce jobs in a seller's market.

Women in medicine

The largest single change in medical school entrants in the last 30 years has been a rapidly rising proportion of women, a change which started in universities as a whole between

1965 and 1970, and has continued progressively ever since. At present there are no signs of 'topping out' even though almost 50% of entrants are now women (Figure 7.7). Intriguingly, until about 1976 fewer women entered medicine than entered university as a whole, but since then the situation has reversed, perhaps reflecting an increasing number of women studying science at school. As women have entered medical schools, so inevitably and inexorably they have qualified as doctors 5 and 6 years later. Subsequently they have entered many specialities, in hospital and general practice, so that the proportion of women doctors has risen consistently for at least a decade, and probably two decades (Figure 7.7). Of interest for medical research is that women are now well represented even within such high prestige posts as the Wellcome Trust's Senior Research Fellowships in Clinical Science, a male bastion for its first 16 years of existence (Figure 7.8). The full effects of such a large-scale transformation of a once male-dominated profession, to a more equal sex balance (and in some specialities to a female predominance) have not yet been worked out. One important change was that the Department of Health, worried especially about the careers of women doctors, commissioned the research published as *Doctors and their careers* (Allen, 1988). Its principal conclusion seemed to be that although women doctors experienced some particular career problems, the criticisms of career development affected both female *and* male doctors. An immediate concrete result was that the DH and professional bodies examined the particular career barriers presented to women doctors, and JPAC now includes part-time training posts, for doctors of either sex, within its quotas.

Medical teachers

University teachers have been under government pressure for the past decade, as is reflected in cut backs in overall university spending in real-terms, which in the early 1980s resulted in cuts in student numbers (Figure 7.1). Recent increases in admissions, in 1989 and 1990, have had to be carried out at 'constant funding'. Academics themselves have been under financial pressure from such cuts, and

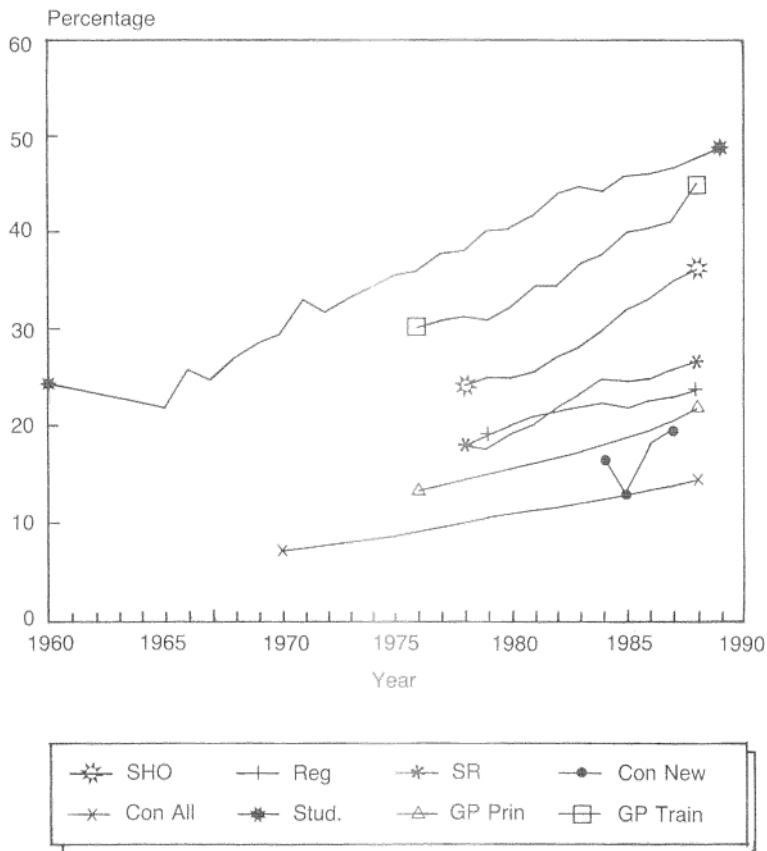


Figure 7.7 Percentage of medical school entrants, SHO's, Registrars, Senior Registrars, Consultants appointed within the past five years, Consultants (overall), General Practitioners, and Trainee General Practitioners who are female. Data for qualified doctors are for England and Wales, whereas data for medical students are for the UK. SHO = Senior House Officer, REG = Registrar, SR = Senior Registrar, CON NEW = New Consultants appointed within past year, CON ALL = All Consultants, GP PRIN = General Practice Principals, GP TRAIN = General Practice Trainees. Sources: Anon. *Health Trends* 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989). UCCA 1965-89). Allen (1988), p. 12. Royal Commission on Medical Education (1968), p. 328.

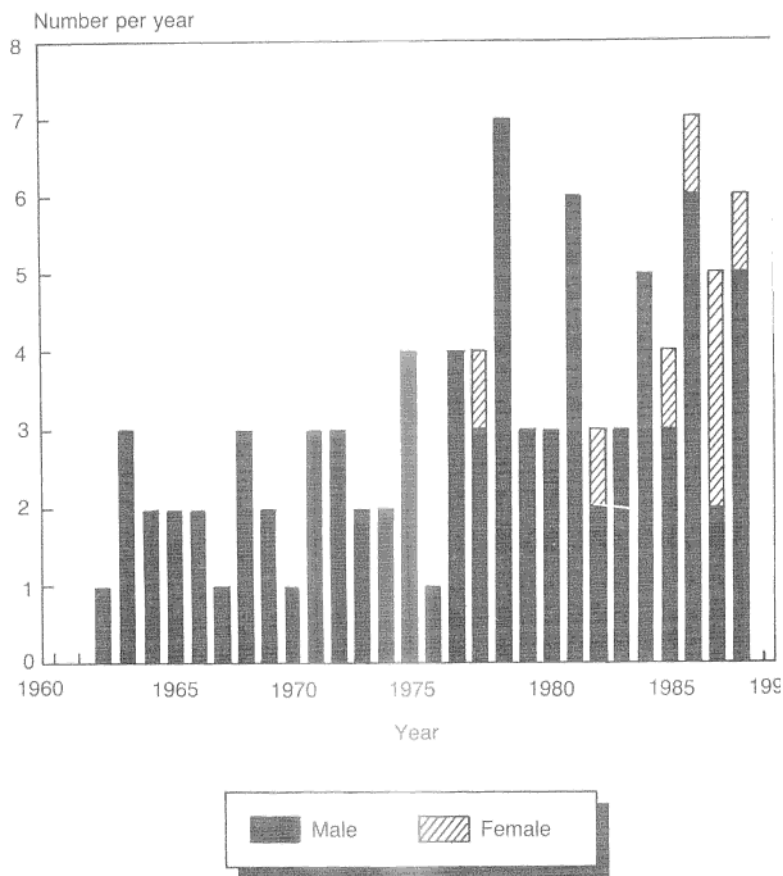


Figure 7.8 Numbers of male and female Wellcome Senior Research Fellowships in Clinical Science. Source: Wellcome Trust (1989).

1986 saw the first industrial strike action by members of the Association of University Teachers (AUT) in support of a pay claim. Medical school teachers are divided into two clear groups: pre-clinical teachers, nowadays mostly non-medically qualified, and paid on the same scales as other academics (irrespective of medical qualifications); and clinical academics, whose pay has been tied to NHS scales. Recent years have seen two problems of funding. Attempts have been made to pay clinical teachers less than NHS

doctors, this being resisted by the BMA. In addition doctors' pay has been protected while other academic salaries have been allowed to slip (Figure 7.9). Consequently the gap between pre-clinical and clinical salaries has widened to the extent that few medically qualified teachers are willing to work in pre-clinical departments. Finally it must be noted that although clinical teachers have been paid the same as their hospital colleagues, the cost of their salaries has not been fully met by government provision, universities making good the shortfall, which represented 17.9% between 1982-3 and 1987-8 (Committee of Vice-Chancellors and Principals, 1987).

'Working for Patients', the white paper in 1989 that preceded the National Health Service and Community Care Act 1990, contained only one noncommittal paragraph about medical education and research, and the implications of new methods of funding for medical education are far from clear. The delivery of education is increasingly being moved into the managerial structure (Bayley, 1990), both in hospital trust and directly managed units. Current links between the health service and clinical teaching, particularly in teaching hospitals, may be threatened and there is uncertainty over the future of the current informal arrangements whereby NHS staff carry out clinical teaching while clinical academics see and treat patients. The mix of conditions treated in individual hospitals may become distorted by hospitals opting to develop profitable specialities, thereby diminishing the breadth of clinical experience available for students. In hospitals that opt out and become self-governing, the arrangements for ensuring that teaching is protected are unclear, and it is possible that financial pressures on staff could decrease motivation to teach.

Clinical research could also be at risk. Self governing hospitals will determine their own salary structures, and the present parity in salary between academic staff and clinical staff is unlikely to be maintained. Higher costs of treatment in research oriented hospitals may alternatively run the risk of making such hospitals less economically attractive, particularly after 'opting-out', which could additionally undermine both clinical research and clinical teaching.

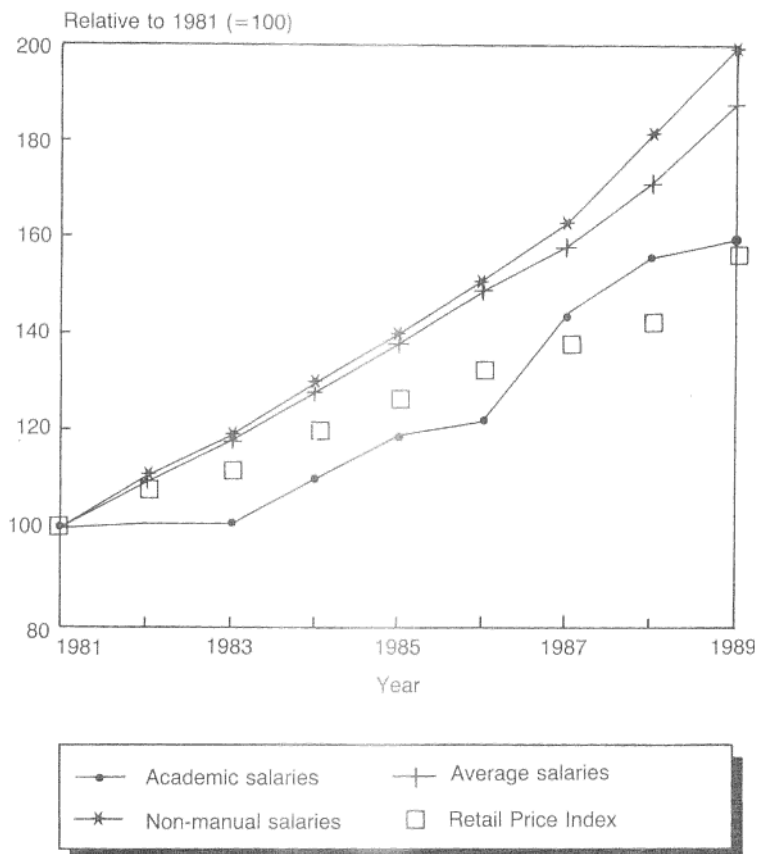


Figure 7.9 The earnings of UK non-clinical academic staff in comparison with average earnings for all workers, average earnings for non-manual workers, and the retail-price index (RPI), relative to 1981 (= 100). Source: Association of University Teachers (1990).

Medical schools lost nearly 25% of UGC/UFC funded staff between 1979 and 1986 (Figure 7.10), with the result that teacher:student ratios have increased from 1981 onwards (Figure 7.11). Although during the same period the total number of academic staff employed in medical school has grown (Figure 7.10), this has been due only to staff on short-term contracts, drug-company money, posts funded by charities, and the like. Quite naturally such staff often

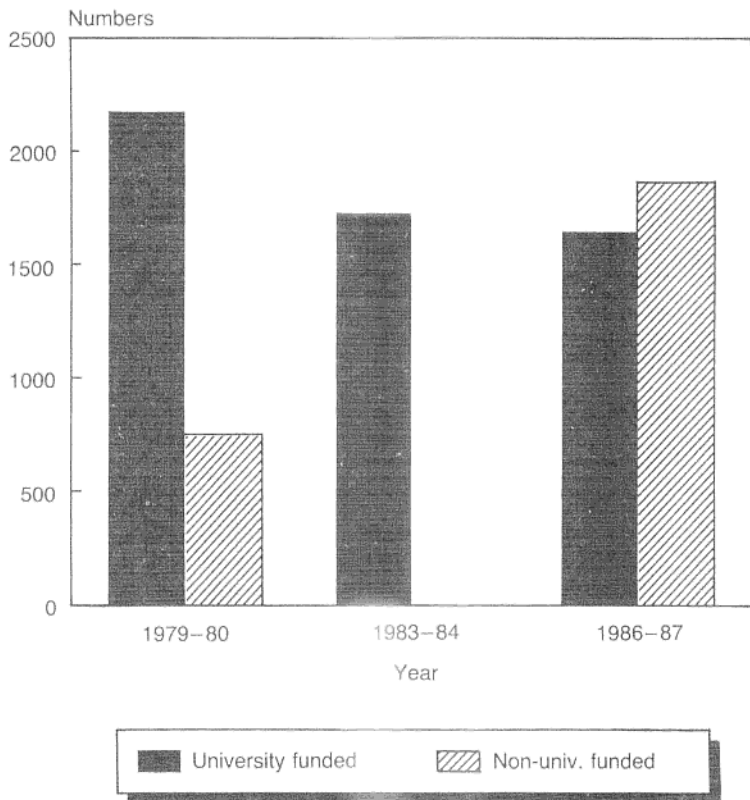


Figure 7.10 Total number of medical academic full-time staff in UK medical schools, funded by universities and by non-university funding. Source: Academic Medicine Group (1989).

do not see teaching as their primary responsibility, so that teaching has an ever decreasing priority in the eyes of medical school staff. The situation was exacerbated by the UGC/UFC surveys of 1986 and 1989 of research quality in all university departments (and it has as yet made no attempt to assess teaching quality). The result, as a *Lancet* editorial put it, was an order of priority for clinical academic staff of 'Patients first, research second, teaching third'. And indeed any medical school (or indeed medical school teacher) which does not look to its research output – or particularly the research grant *income* since that seems to be the actual

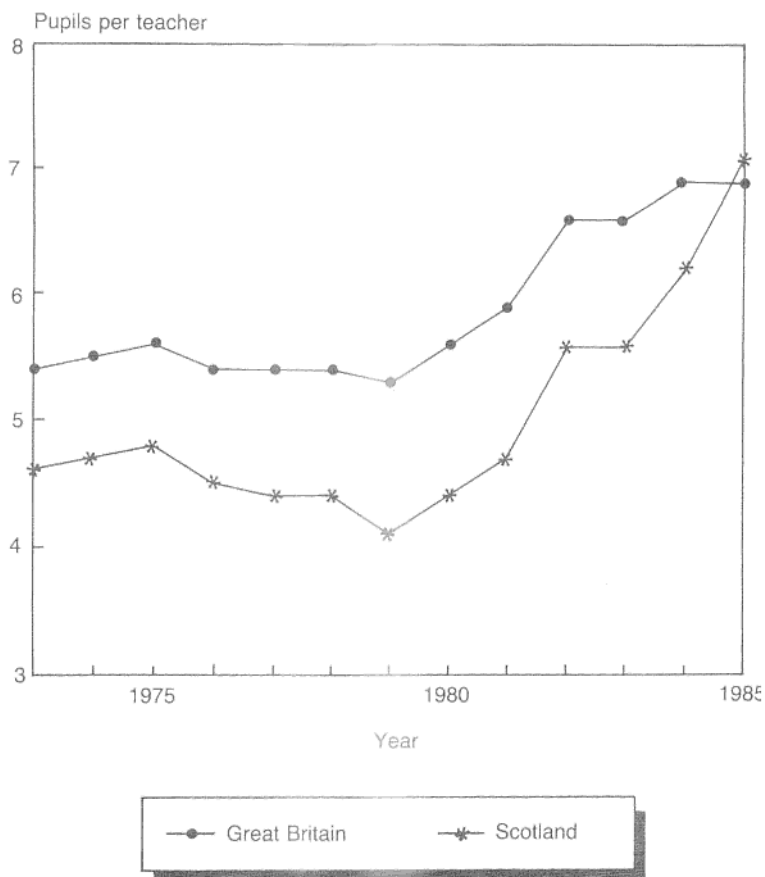


Figure 7.11 The ratio of clinical teaching staff to clinical medical students from 1973 to 1985, for Great Britain and for Scotland (expressed as full-time equivalent teaching staff divided by full-time equivalent academic staff). Source: Hansard (1987).

criterion of 'success' – is likely to find itself increasingly vulnerable in the cold economic climate in which medical schools now operate.

Medical research

Medical practice and medical research are opposite faces of the same coin: good research stimulates good practice and

vice-versa; and talented students are attracted into medicine by the opportunity to do good research. Medical schools, like universities in general, have a dual responsibility for teaching and research; and good research opportunities attract medical graduates to teach and research in medical schools. The past decade has seen medical research paralleling medical education and science research in general, in showing a continual downwards trend in opportunities, finance and support. The situation is made more acute by recent advances in fundamental and applied biological science during the past decade, particularly in molecular genetics and cell biology; these permeate almost all areas of medical research and practice, are expensive to run, and require a sustained effort over years, rather than stop-go policies based on short-term funding. Not surprisingly many talented researchers therefore choose to work abroad, particularly in North America, where support is indubitably better. The size of the 'brain drain' is often disputed, but its existence seems beyond question. Talented researchers also require an infrastructure of well-trained support staff, but these also are being tempted to non-scientific jobs offering better pay, career prospects and morale, so that experienced laboratory staff and technicians are also now at a premium.

The measurement of the quality of scientific research output is difficult. Making sense of the bibliometric data is not easy, but Smith (1988a) has reviewed a number of international comparisons and there seems little doubt that UK funding of science does not compare well internationally, and that the situation has deteriorated for several decades, with an acceleration in the 1980s. Smith quotes the gloomy conclusion of one report: 'Britain's hopes of remaining a leading scientific power can only be described as slim in the light of the results from this international comparison of funding' (Irvine and Martin, 1986). The decline can be seen both in funding and in research output, measured as total biomedical research papers published each year, and by citations of those papers by other researchers, all of which decline or remain static while other countries' contributions are mostly rising.

In medical research itself there are several indices of changing finance and altering research opportunities. The

grant-in-aid of the Medical Research Council (MRC) has been pegged at a constant amount in real terms since 1981–2 although in practice since salaries have increased at a greater rate than the Retail Price Index (against which the MRC's budget has been kept level), the result can only mean low salaries or less researchers. When coupled with inflationary costs for scientific equipment being greater than for retail prices in general, the resultant is a cut of about 10% per annum in real terms (Smith, 1988b). Total spending on

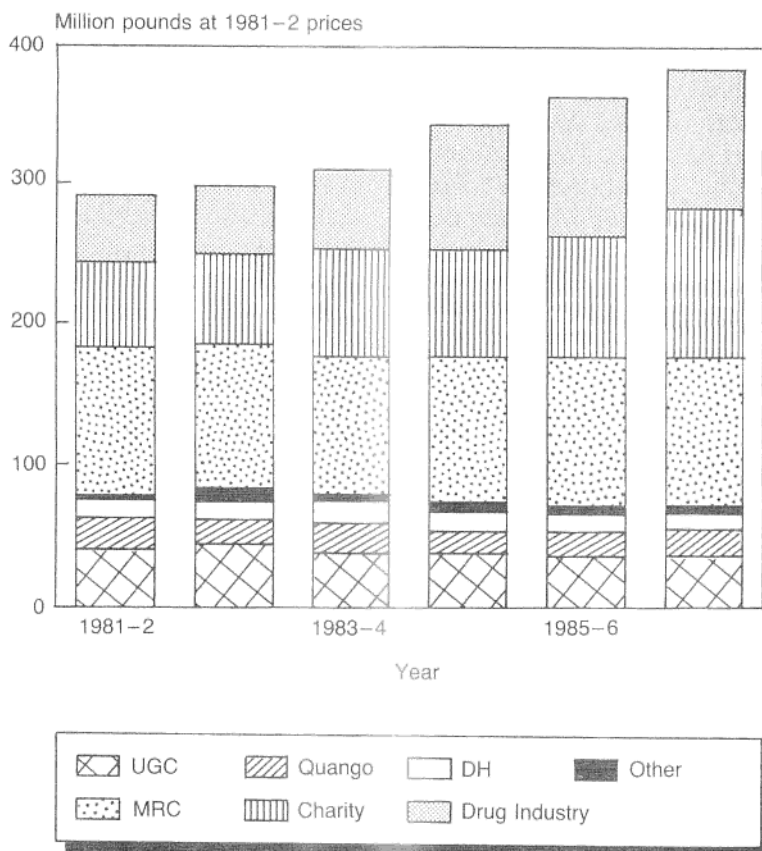


Figure 7.12 Estimates of overall expenditure on medical research at 1981–2 prices. Source: Smith (1988b).

medical research has increased in real terms (i.e. adjusted for retail price inflation) throughout the 1980s (Figure 7.12), due mainly to increased spending by the drug industry (principally on routine research for its own short-term commercial ends), and to increased spending by the major medical research charities (such as the Imperial Cancer Research Fund, the Cancer Research Campaign, the Wellcome Trust, the British Heart Foundation, and the Arthritis and Rheumatism Council, which alone spent £119.2 million on research in 1988–9, a figure comparable with the MRC's income). Once again, although Figure 7.12 paints an apparently optimistic picture, inflation for scientific research probably means that overall it only represents level-funding (Smith, 1988b). Total spending by medical charities (funded by public donation) now exceeds that of the MRC, and supports a majority of medical research workers and projects (Choy *et al.*, 1990). The 1980s have seen a shift of financial responsibility for medical research from the public purse to the voluntary sector, in effect privatizing medical research, with a concomitant loss of public control and accountability.

Arguments could be put forward for the potential benefits of such 'privatization' of medical research, due to a decentralization and a devolution of decision-making, resulting in a wider range of projects and initiatives, and a broader, more responsive, fund-raising base. However, although there may be such benefits, it must be seen that privatization does not guarantee freedom from political influence. On the contrary, it may impose greater constraints on the direction of research and thereby curtail academic freedom. At present the academic standards supported by the major charities are high, and peer review of grant applications seems to be used by most charities. However, charities need not always be so punctilious. Unlike the MRC, which is in principal responsible indirectly to Parliament for its actions, most medical charities are totally autonomous. The proliferation and hence fragmentation of privately funded research also reduces any possibility of larger scale more directed research attacking important problems from different vantage points. If this trend of funding continues, there is a strong case for more effective

mechanisms to be established for regulating the quality of the funded research.

The rapid development of charitable, non-government expenditure on research, and its effects upon perception of research priorities, can be gauged from the large sums being spent on cancer research by the Imperial Cancer Research Fund and the Cancer Research Campaign. The MRC has now effectively retreated entirely from supporting this major clinical area and ceded all control to the charities. Whilst pragmatically a sensible solution for optimizing limited research funds in a time of financial contraction, it is surely serious that no official body now supports this major research area, and hence control has been relinquished over the nature, quality and direction of research.

As real-term MRC funding has decreased, so it has funded fewer and fewer of the applications made to it, be they research studentships, or project grants (Figure 7.13), the result in the latter case being the increasing rejection rate of alpha-rated projects (i.e. projects meriting finance on scientific grounds), a phenomenon found in other research councils as well as the MRC (Save British Science, 1990). The result is that applications to the MRC have decreased (Figure 7.13), and there has been a concomitant increase of application and funding by charities such as the Wellcome Trust (Figure 7.13). In late 1990 the crisis of MRC funding was such that it found itself unable to fund 89 projects it had already approved, and funding was deferred to the next financial year; the presumed result is that future funding will need to be cut back yet further.

Medical research in the United Kingdom suffers from a lack of funding and a loss of morale, with subsequent knock-on effects upon medical education and practice. In 1988 the House of Lords Select Committee on Science and Technology summarized the problems of medical research thus:

'It is not only that funding is so inadequate that good research proposals are not supported; it is not only that career prospects in research are often dismal; it is not only that patient care frequently inhibits research activity, important as all these factors are. The overriding cause of

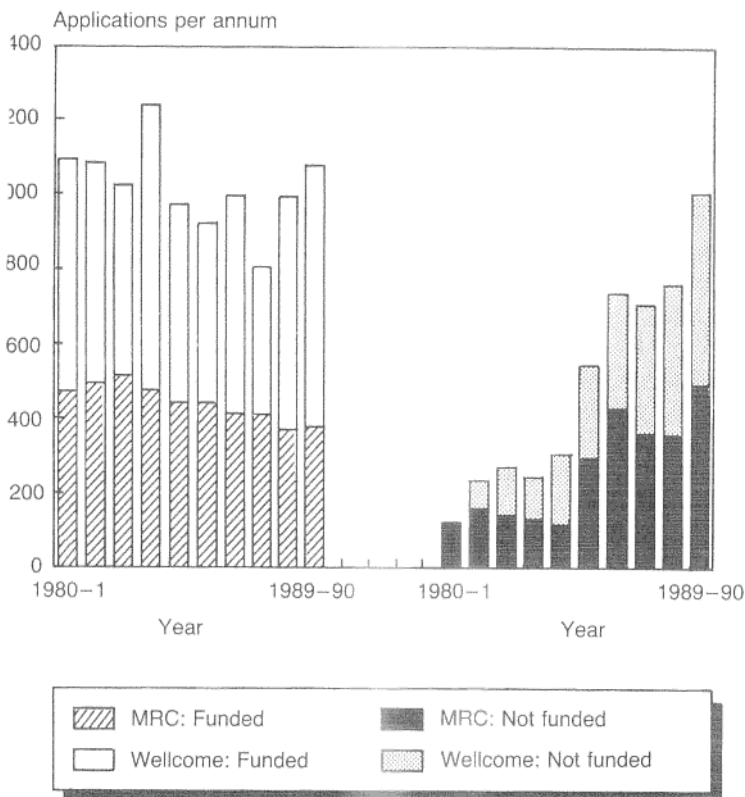


figure 7.13 Numbers of successful and unsuccessful project grant applications to the Medical Research Council and the Wellcome Trust. source: Medical Research Council (unpublished observations), the Wellcome Trust (unpublished observations).

the collapse of morale is the impression, right or wrong, that neither the NHS nor the DHSS demonstrates any awareness of the importance of research nor is prepared to devote time, effort and resources to promote it.' (Quoted in Smith, 1988c.)

the latter deficiency is beginning to be corrected by the creation of a National Health Research Authority. Its role and its budget are not yet clear, and also in particular whether it will be financed by reducing other existing re-

search funding. Nevertheless in a valedictory message to his successor in the new authority (Department of Health 1990b), the DH's chief scientist felt obliged to warn of 'a legacy of confusion, conflict, and a widespread perception that the Department's research programme has failed to match expectations' (Anon, 1990a).

The 1980s can be seen as the lost decade for UK medical research (and in a valedictory editorial to Mrs Thatcher *Nature* argued that it was lost for all research, principally due to the cabinet having no background in, experience or interest in, or understanding of the needs of science; Anon 1990b). While bio-medical research opportunities have exploded, government financed research has been chronically underfunded, and research charities have been required to shore up the shortfall. The opportunities for the 1990s seem grim, with underfunded laboratories, outdated equipment, disillusioned researchers and a lack of trained technical staff.

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In the Best of Health?

The status and future of health care
in the UK

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