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Universities and Communities

A Report by the Centre for Urban and Regional Development Studies
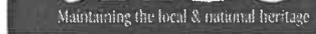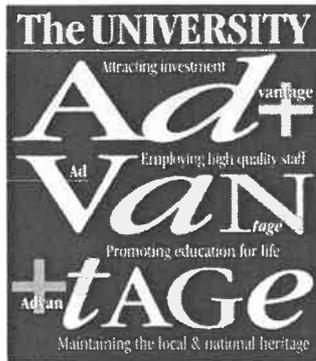for the Committee of Vice-Chancellors and Principals

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Universities and Communities

April 1994

John Goddard
David Charles
Andy Pike
Gareth Potts
David Bradley

Foreword

All universities have grown out of their local communities. Many began as institutes to local working men and women. They were funded by local organisations and people and were regarded with local pride. As they developed into the universities of today, with their national and international dimensions, they have retained this local focus.

The Committee of Vice Chancellors and Principals of the Universities of the United Kingdom seeks to emphasise the contribution of each university to its local community. It has commissioned this study from Professor John Goddard and his colleagues at the Centre for Urban and Regional Development Studies at the University of Newcastle, as part of a series of research studies on the developing role of higher education. The study shows the wide range of links between universities and their local communities. These vary with the nature of the community and the academic profile of the university, and have developed from a recognition of the complementarity of the traditions of both.

The links go even deeper than the considerable economic contribution of universities as major local employers and purchasers of local services; although this aspect should never be underestimated and is now reflected in the plans of local authorities. Rather, it extends to the provision of full-time (and particularly part-time) courses to local people, and to significant input to the cultural life of the community, to local industry and commerce. The study contains many examples of the essential ties between universities and their communities.

Universities are not ivory towers, despite the popular misconceptions in some quarters. They are living organisations which draw their vitality from the world around them. Universities and their local communities will continue to develop together.

Dr KENNETH EDWARDS
Chairman, CVCP

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Executive Summary

Few large cities or sub-regions are now without a university. There are 17 major institutions in London. Several cities have two universities for the first time.

Universities are an important growth element in regional economies when other sectors have been declining or growing less rapidly. Higher education employment is concentrated in cities – the 10 largest cities, with 34% of all jobs, also contain 46% of higher education employment. In many major cities (eg, Manchester, Edinburgh, Glasgow, Sheffield and Nottingham), university employment is twice the national average. Universities are often amongst the largest employers in these cities – 3rd and 5th in Newcastle, 8th in Nottingham. In the North East less than 30 private companies have over 1,000 staff. There are 5 universities in this category.

Technology Transfer

Technology transfer is one of the main external linkage activities and generally the most important issue in mission statements in terms of local interaction. This reflects industrial demand, local development prospects, and pressure from government. However, the transfer of products embodying technical knowledge is not the most important form of interaction. Much interaction is in "non-commodity" form. The main mechanisms for transfer include:

* Research grants and contracts involving industrial partners. Universities in more successful regions tend to have higher income from these sources. Industrial contacts are largely non-local.

* Consultancy. This provides an opportunity for knowledge transfer and greater tailoring to regional needs. However,

individual consultancy arrangements are less likely to result in such tailoring than focused initiatives.

* Licensing. This is largely non-local due to the difficulty of matching products to local firms.

* Personal exchanges. Project work with students; sandwich courses; graduate retention in the local labour market; teaching company schemes; visiting professors; all make significant contributions to technology transfer but are seldom presented as such.

* Spinouts. These have a long history, and are increasing with the development of IT and bio-technology. A notable feature is the recent growth of campus companies where the university takes a major stake.

* Science Parks. Real university involvement is generally low, but universities gain from successful real-estate development with little input of management time. Science-park lobby is liable to displace a wide range of other mechanisms which are more important.

There is a key role for management schools. Decisions to invest in technology and its effective use depend on the awareness and competence of managers. Some management schools focus on the special needs of small businesses, but this can undermine the achievement of research goals. Non-scientific knowledge has an important role in support of marketing by local firms.

Few inward investment agencies in England are able to communicate, in sufficient detail, the scientific strengths or skills potential of universities. More decentralised corporate organisation of some firms is

creating opportunities for upgrading of local plants. Reinvestment chances are considerably strengthened by greater local embeddedness, including HEI links. There is a key role for TECs. Joint development with universities of labour-market needs analysis.

Tourism and Conferencing

Universities provide visitor attractions, but these are generally minor, adding to length of stay and total spend, rather than being the reason for the visit. Universities are also vacation conference venues, with 6.4% of the conference market in terms of days. 30 universities run year-round management training centres (15% of UK market). Universities lack top-standard amenities, especially catering.

The Built Environment

University buildings generally add to, rather than detract from, the quality of the built environment. 75% of universities are responsible for listed buildings – some with up to half their total floor-space listed. The central location of many universities and the access they provide means that they are important contributors to the quality of public space within a city. Current expansion "on the cheap" is undermining this quality. Changing university research and teaching needs have undermined the case for such spaces (eg, botanical gardens, natural history museums).

Universities are currently increasing their space requirements. A 1991 survey of 28 universities found that 58% were planning to acquire new buildings and 65% were engaged in major refurbishments. A 1993 survey of

University conferences attract delegates from all over the world

32 "old" universities revealed 15,000 new student residential places being built. Expansion is most recently taking place in inner city areas where UDCs and other agencies, unable to maintain 1980s momentum, are looking to universities to plug the gap.

Students make a major contribution to housing markets. But there are negative impacts on rent levels for local populations arising from high-paying multiple occupancies. There are also environmental "disbenefits" in terms of maintenance, safety, etc. of student housing.

Planning permission for student accommodation and car parking are major sources of conflict with local authorities. A long period of consolidation and adaptation of existing buildings has led some local planning authorities to regard universities as static institutions and consequently to introduce over-restrictive land-use policies. Some planning authorities enforce demanding planning restrictions and planning gains.

Social and Community Development

"New" universities are more locally orientated in terms of recruitment. Around half of "old" universities estimate that they recruit less than 20% of their students from the local area whilst half of "new" universities recruit over 40% locally. Local recruitment is most marked in Scotland. "New" universities have a higher proportion of their students who are mature or access entrants with non-conventional qualifications. Some "old" universities are moving in a similar direction. As many "old" universities as "new" have established franchises or gateway arrangements with the FE sector.

78% of universities hold free public lectures (17% charge). These are often run in conjunction with local bodies. Lists of experts are supplied to the local media. "Old" universities offer more local

sporting facilities, but there is generally a lack of promotion. Many facilities have been developed in conjunction with local authorities and some reciprocal arrangements exist.

90% of universities offer some public access to main libraries but do not publicise the fact. The main information demand is for professional and European legislation information. Other facilities include exhibition space, language centres and bus services.

University-based multi-art centres in smaller towns have become important cultural centres, while university facilities in larger cities play a supporting role. Student unions are important to local youth culture. Their concerts provide a niche between club and major venues. To reflect public usage many university facilities are being transferred to independent trusts or other partners.

76 university collections (out of a total of 300) are designated by the Museums and Galleries Commission as being of "national distinction". Several have received HEFCE special-factor funding. 54

are open to the public. Underfunding has reduced opening hours and the amount of material on display. Lack of relevance to current university needs has encouraged disposal.

Universities are important parts of the community sector through training involvement in social-work practice, general medical practice, etc.. Contribution to the community also occurs through social research in fields such as police studies, housing, health services. 125 student action groups provide 15,000 volunteers who work with existing voluntary and statutory community organisations. The estimated economic value of this activity is £6.9 million. Rag fund-raising contributes approximately £2m a year to student community action projects.

American experience shows that voluntary work teaches transferable skills such as problem-solving and negotiation. This "education for citizenship" brings the needs of the community closer to the core educational mission of the university.

Managing the University–Community Interface

Only 4 universities do not refer to the local community in their institutional plans. 81% have seen an increased involvement over recent years. But only 47% of "old" universities regard this as a matter of high priority, compared with 74% of "new" universities. "New" universities are more likely to see themselves as supporting regional institutions, whereas "old" universities emphasise contribution to the cultural life of their region.

Most "old" universities see themselves as "international institutions seeking to provide local support" whereas most "new" universities "seek to serve the local community and develop international strengths". 53% of "old" universities regard themselves as "proactive"
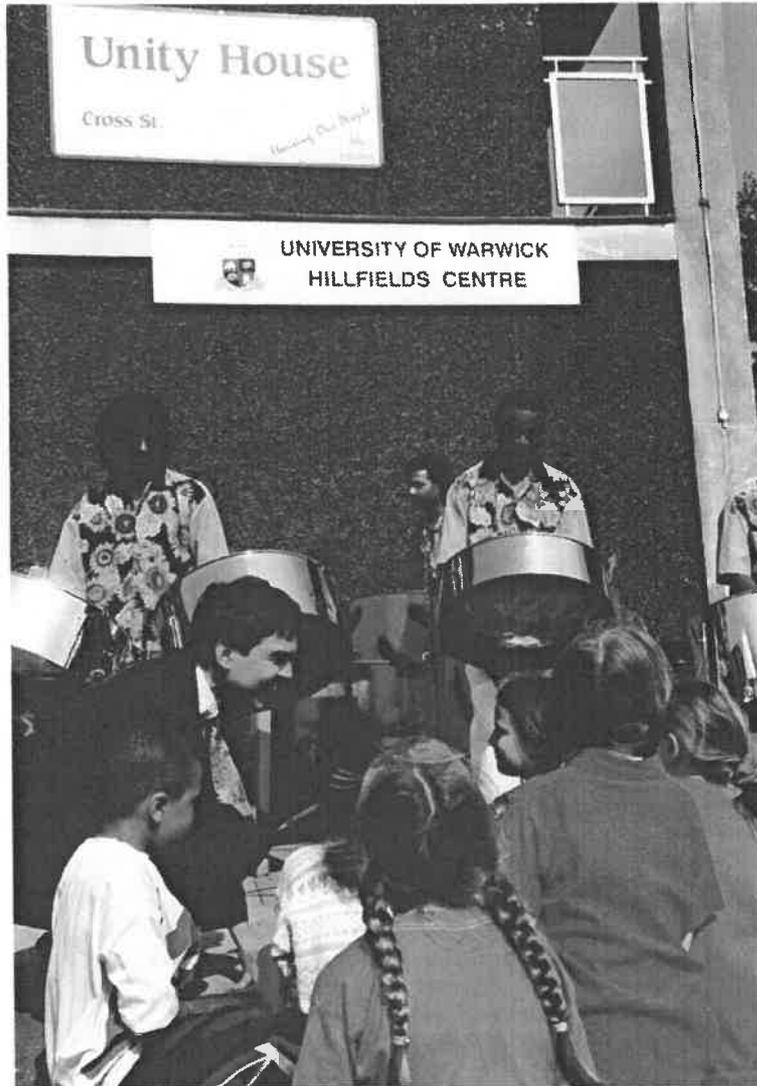
Bound to the community with bands of steel

towards the community compared with 78% of "new" universities. It may be easier for the former to develop local links than for the latter to go global.

In "old" universities central support is provided by continuing education, industrial liaison, public relations and careers officers. In "new" universities this is likely to be provided by a senior appointment such as Director of Corporate Affairs. In some "old" universities new structures are being put in place. The aim in several "new" universities is to have the commitment to the region "firmly embedded in the consciousness and responsibility of all staff".

Statutes of "old" universities often require ex-officio representation of outside

organisations on university governing bodies, whereas "new" universities emphasise individual membership. More than half of all universities have regular meetings with local authorities; in the case of "new" universities these are more likely to deal with economic development, urban regeneration and labour market matters. 81% of "new" universities record good relations with local authorities, compared with 43% of "old" universities.

"New" universities are strengthening their relationships with health authorities and trusts, challenging the position previously confined to "old" universities with medical schools. "Old" universities have statutory appointment

responsibilities on various local bodies but are less likely actively to encourage their individual staff members to take on civic duties. Only 12 universities keep a record of staff's external appointments (eg, as councillors, to TEC boards, health authorities and trusts, school governorships, company directorships). Through such appointments universities play a role in the functioning of local civil society.

Many universities provide accommodation for the offices and meetings of professional associations. Universities provide an additional focus for the cultural and professional life of the nation outside London. Universities contribute to the less tangible aspects of economic development by building social networks, by linking key actors and feeding into these networks.

Relations with professions and businesses are being formalised into "clubs" with supporting information services. Other arrangements are being facilitated through local consortia. Although competing for students, universities recognise that they will benefit collectively by raising educational aspirations in areas where there is a weak tradition of staying on in education, or seeking it later in life.

Variations in the way in which community relations are handled reflect different interpretations of mission, mix of mainstream activities (eg, Medical Schools or not), different local contexts (eg, UDC or not). "Old" universities without a strong local orientation are strengthening local links, partly in response to outside bodies seeking to tap into their resources. The system of university/ community links is therefore undergoing rapid change.

The Way Forward

For most groups, the university remains a "black box" whose procedures seldom follow business and government

practice. The challenge is to identify mechanisms for better structuring university – community relations whilst recognising these procedural differences. However, university links should not be regarded as a panacea for too many community ills.

Central activities (estates, personnel, purchasing, industrial liaison) operate separately with limited lateral communication in terms of community implications. Key interactions are decentralised through individuals and departments. An audit of existing community linkages is required before any new structures are put in place.

Universities should undertake a survey of all community-based activities. Each area of activity (eg, economic development, built environment and social and community development) needs a clearly identified "socket" within the university into which individuals and organisations in the local community can plug.

The community development strategy should be informed by analysis of the university's capacity, and of community needs. Local authorities are the most appropriate bodies to draw together the various agencies representing community interest in the university and to help develop a shared strategy (together with TECs, health authorities, chambers of commerce, enterprise agencies, the police, and integrated regional offices of central government.)

A wide range of government departments generate policies which affect universities' impact on their local community. Few analyses of these local implications are undertaken and few statistics are analysed geographically. Universities should cultivate a wider range of Whitehall departments.

Co-ordination of community links without additional funding is problematic; community involvement does not always clearly link to any immediate specific income stream. Key

opportunities are provided by the European Regional Development Fund (ERDF) and European Social Fund (ESF) in some areas. Similar arrangements could be put in place elsewhere by the re-direction of existing UK resources.

Preface: Universities and Communities

The Rationale for the Study

The question of how universities should relate to the outside world – and how the community at large should relate to universities – is as old as universities themselves. It is a question that has been periodically revisited, usually at times of university expansion, but also in the context of changes in the organisation of the economy and society generally. The fact that the topic remains of intense interest is indicative of the need to strike a balance between the three key elements in the mission of universities – the generation of new knowledge, the passing on of this knowledge to future generations and serving the needs of industry and the community.

There are a number of developments in the contemporary environment of universities which have important implications for the way universities link to their local communities and which suggest that it is important to review this topic at the present time. At least five components of change can be identified:

* changes in central government's definition of the mission for universities as part of the development of a system of mass higher education

* a related increase in the demand for skills and knowledge in *all* aspects of work, not just that undertaken by the elite, in response to increasing competition in a global economy

* increasing rates of technological change and new ways of organising the production and distribution of goods and services, including changing relationships between large and small firms, all of which

point to new demands on the science base

* changes in the structure of government, particularly an increase in the number of actors and agents and a wider role for the private and voluntary sector, resulting in a greater diversity of bodies having a stake in the governance of territory and the delivery of public services

* new patterns of urban and regional development arising from the greater mobility of capital and labour, particularly within the framework of the Single European Market and the decline of industrial sectors and the emergence of new sectors (eg, Arts and Cultural Industries).

While all of these factors are national and international in character, they each have implications for different parts of the university system and how the universities interact with specific local circumstances. More importantly, it is chiefly at the local level that the *interaction* between *all* of these forces for change becomes clearly visible both to universities and those public bodies with responsibilities for area development.

In this context universities themselves are changing from self governing collections of scholars to more centrally managed institutions in which the leaders need clear strategies which can be translated into organisational structures and processes. Relations with the local community are an important part of the operating environment for many aspects of the work of the university and frameworks for handling these relations are increasingly required. All of these considerations point to the need for a wide-ranging review. Whilst specific aspects of university/community relations

have been examined previously, attention has focused particularly on issues such as their direct economic impact, technology transfer and physical planning rather than the sum total of challenges confronting the universities and which have a local dimension.

This report seeks to plug the gap in the current UK literature by providing a broad overview. One danger of such breadth in a short study is that many topics are inevitably given an abbreviated treatment. There are major and very immediate issues with a strong local dimension which are confronting universities and which are only touched upon in this survey. These include the reorganisation of the Health Service, with threats to universities with clinically based medical schools and opportunities for universities providing health-related research and teaching; the current review of adult continuing education and proposed changes in the status of student unions are other important issues.

There are also significant variations within the UK in the local institutional environment facing universities, notably in Scotland, Wales and Northern Ireland; the circumstances in Oxford, Cambridge and London are also very different. The Open University, which plays a major role throughout local communities in the UK, particularly in terms of widening access in ways which benefit conventional universities, also needs to be considered in this context. Inevitably the report can only touch on such topics and regional differences.

The report is also based on the assumption that improved relations with the local community is desirable and will bring benefits to all parties. Such assumptions need some

qualification. Although universities are responding to local needs and conditions, there remains a potential conflict with their increasingly global mission. The quest for new knowledge and the task of both translating and passing this information onto students cannot be restricted to prevailing local knowledge or simply that useful to local interests; university staff must seek new knowledge from global sources, educating students for life-experiences and equipping them for competition in national and international labour markets.

In terms of support for industry, any university that confines itself to that currently demanded by local firms would be failing its community by not providing an opportunity for future diversification through provision of educational resources, skills and technology for new or established firms, or assisting in attracting international businesses that might invest in the area in the future. Managing this balance between global awareness and local responsiveness remains a major challenge.

For various parts of the university this balance between global and local interest will clearly vary. Here a further distinction can be made between those parts which are centrally managed (involving such facilities as libraries, museums, theatres, sports facilities, science parks, technology transfer and industrial liaison offices, continuing education and public relations) and the commonly decentralised engagement of

departments and individuals (whether staff and/or students, working on a one-to-one basis with local firms, economic development agencies and the voluntary sector). This report will argue that matching, co-ordinating and balancing these four elements – global awareness, local responsiveness, centralised strategy and decentralised engagement represents a major challenge for vice-chancellors and principals and those outside looking to tap into universities for the benefit of the local community.

The Study Methodology and Structure of the Report

The study was commissioned in October 1993 as a four month desk-based national review of the actual and potential contribution of universities to their local communities. The review has drawn upon published literature including studies undertaken or commissioned by universities themselves, their own publications, the work of national bodies such as the NUS and national statistics from the Higher Education Funding Councils and the Department of Employment. These sources are listed in Appendix I.

At an early stage, we identified two areas of particular importance: the direct contribution of universities to their local economies, and the role of the student body in relation to community

development. A number of universities have undertaken studies of their local economic impact and we commissioned an independent review of these from economists at the University of Northumbria. This review is included as Appendix II. We have also drawn upon a review of student engagement in the community as part of their educational experience focusing on the American experience and undertaken by a colleague at Queen Mary and Westfield College, London. as Appendix III.

In order to gain an overview of current policy and practice we finally undertook a postal questionnaire survey addressed to vice-chancellors and principals in membership of the CVCP, which covered details of the engagement of the university with its local community. The questionnaire and list of respondents is included as Appendix IV.

We received replies from 64 out of the 101 institutions with the responses being broadly representative of "old" and "new" universities, and universities in different parts of the country (North and South, Metropolitan areas and small cities). Responses reflected the formal position of universities and the perceptions of heads of institutions, rather than actual process of interaction undertaken by a large number of staff and students. Furthermore, in the absence of fieldwork, it is difficult to be confident as to how far the conclusions distinguish between reality and the aspirations of university leaders.

Universities provide in-service training

Following a review of the changing external environment of universities, which elaborates on some of the topics addressed in this preface, the report examines the thorny problem of defining the university's "community". We then go on to examine various facets of that community, starting with the local economy in aggregate and in a static sense and then reviewing the dynamics of university engagements with that economy through processes of technology transfer, contribution to the development of local labour markets and to diversification by the support for new sectors.

communities adopt to managing these wide ranging interfaces, drawing chiefly on responses to our questionnaire. Figure 0.1 sets out this framework.

In the conclusion we move from description to prescription, suggesting how the interface might be better managed in the public interest, by universities, local agencies and central government. The report therefore addresses three audiences, universities themselves, the local community and central government. It recognises that there will not necessarily be a concordance of interest between these groups and

only been able to mention a fraction of the programmes currently active. We hope our selection has been even-handed between old and new universities, large cities and smaller communities in less urbanised areas, and between different regions of the country.
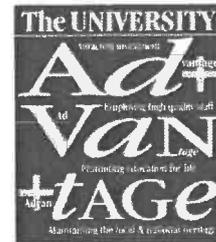
The Barclays Venture Centre, University of Warwick Science Park – universities and businesses in partnership

Figure 0.1: Universities and Communities Linkages
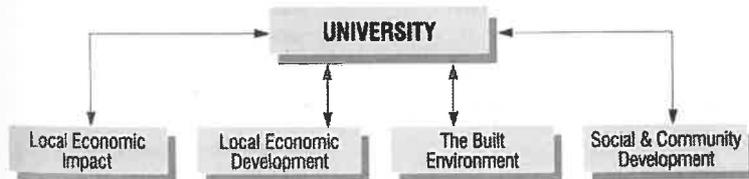
Source: CURDS (1994)

We then consider the contribution of universities to the quality of the local built environment and the physical structure of the city and how this contribution is regulated through local land-use planning systems. The last facet of the community we consider is local civil society, embracing access to university education, sport and cultural facilities and the contribution of universities to the voluntary sector. The empirical sections of the report conclude by reviewing the strategies universities and

that the actions of one might have indirect negative consequences for the other. By exploring these actual and potential complementarities and conflicts the report will hopefully contribute to a more informed debate and subsequent action by all parties.

Throughout the report we have referred to examples of initiatives which seek to improve links between universities and communities. We are very conscious of the rich diversity of ongoing interactions but have

1 Universities in a Changing External Environment

1.0 Introduction

In the preface we noted that a major stimulant to the debate over the role and contributions of universities in their local communities were shifts in the external environment in which they operate. Recent changes include organisational and structural refashioning of both the public and private sectors, and developments in both the higher education and other policy fields indirectly affecting universities. Before examining in detail the external interactions and range of contributions of the universities we outline some of these external dynamics and the broad implications they have for the future of higher education in the community.

1.1 Changing Higher Education Policy: Expansion, Unification and Stratification

Successive periods of expansion in university higher education have seen changes in the nature and culture of the university system. The new post-war universities era in some cases had resonances with the Oxbridge model but also saw newer formats. The diversity of settings and foundations, from green-field, out-of-town campuses to converted inner city technical colleges, led to a range of community and industrial involvement. But in the main, there was a coherence in terms of the mixed role of a university in teaching and research. The parallel establishment of the polytechnics as local-education-authority controlled and community-oriented institutions, further insulated the universities from a need to regard the local community in a strategic way.

Expansion has resulted in a considerable broadening of the social background of the student population, parallelling the growth of white collar occupations, and the professionalisation of large sections of the public and private sector. Thus from being predominantly middle class and "elitist" institutions, universities and the polytechnics played a key role in the reduction of social barriers and increased social and occupational mobility during the 1960s and 1970s. In this way universities moved closer to the community both in the wider representation of particular groups from society in staff and students, as well as forging closer ties with particular sectors of employment.

The abolition of the binary divide, and the "rebadging" of the polytechnics brings new issues to the fore, challenging the existing patterns of community linkage and raising the possibility of new forms of segmentation and stratification in the university system. Changes in the governance of the new universities arising from the unification of the higher education system will be explored in Chapter 7, as will new alliances and collaborations with non-university HEIs and further education colleges. These must also be seen in the context of funding reform.

The need for the new universities to compete for resources and students in an enlarged HE market against an increased number of players is leading to a classic marketing problem of product differentiation. Whilst as polytechnics these institutions had a distinctive role both in education and in the community, as universities, the new institutions require a distinctive

approach to offset any disadvantage in terms of low research-rankings and a legacy of inadequate capital investment. In many cases this emergent identity takes the form of a stronger engagement with the local/regional community.

The consequences of the research selectivity exercise will also be a *de facto* segmentation of the old universities, as the most research-intensive institutions opt to focus more on research and postgraduate teaching with a strengthened international role. The growing involvement in European Union research programmes, and international student recruitment patterns are signs of this movement. As reduced grant levels raise the spectre of more "stay-at-home" students, many older universities are being forced into a fundamental reappraisal of their position. For those unable to sustain the international and national role, a more regional orientation seems to be a way out. Thus a more functionally and geographically differentiated system of higher education is likely to emerge in the UK.

1.2 Reorganising Government

The 1980s saw the beginnings of a radical shift in the organisation of central government, which has been reinforced in the early 1990s. There has been a shift in the state's role across the market divide: from government as service provider to government as purchaser of services[1]. Allied to changes in central government have been the reorganization of the institutions and structures of governance at the local level. The old model of a hierarchy of levels of central and unitary local

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1   Jessop, (1991)

government, with clearly defined roles in the local state, has been replaced by a range of single purpose agencies such as Training and Enterprise Councils (TECs), Urban Development Corporations (UDCs), and Enterprise Agencies[2].

A range of *ad hoc* organizations linked to initiatives, such as Business Leadership Teams and City Challenge Boards, have also been set up to draw the various threads together at the local level[3]. The new agencies and teams have looked to universities for membership of their governing bodies, increasingly composed of unelected officials, and for analysis of the problems and prospects for local economic development which could inform their actions.

Moreover, in recognition of the independence of universities, many local agencies not unsurprisingly look to universities to assume a neutral local leadership role. During the turmoil of the 1980s, local authorities also massively increased their involvement in local economic development, including localised technology transfer. Thus the range of relationships and the number of bodies that vice-chancellors and principals now have to interact with at the local scale has multiplied enormously, especially with the opportunity now for funding from the European regional funds.

Central to the success of the government's strategy of reshaping the local state has been the enrolment of the private sector into these new governance structures. This development has principally been realised through the mechanism of public–private partnership which serves two main purposes.

First, in those areas where central government has externalised certain activities, the private sector has been called upon to provide management expertise and strategic guidance for the more efficient targeting of public policies and finance. This

includes statutory bodies such as TECs and UDCs.

Second, local "bottom up" initiatives have also been stimulated whereby local government and industry have collaborated in order to promote local economic development[4]. Usually, in such cases, industry has either identified a self-interest in the health of the local economy (such as in the case of the local electricity suppliers) or sees a corporate social responsibility, in some cases arising out of its own enforced redundancy policies.

Nowhere have these changes in local governance had more impact on universities than those relating to the health service. The introduction of the internal market is replacing the old "knock for knock" relations between health authorities and university medical schools by a much more complex and unstable set of linkages often extending beyond the local area. In addition the government's *Health of the Nation* strategy, with its emphasis on wider environmental influences on health, has incorporated other parts of the university (such as Social Policy departments) into the health care system.

1.3 Technological Change

Whilst universities remain firmly in the public sector they are increasingly seen by government as playing an important role in supporting the increased industrial competitiveness of private business, notably through their contribution to technological change and development[5]. Universities have a long established role in the creation and dissemination of new knowledge for industry through basic research and teaching. However, there is increasing pressure on universities from government to contribute more directly to the economy and this has lead to greater emphasis on applied research with a heightened attention to the nature and

extent of university relations with industry.

Parallel to this has been a change in the organisation of private sector R&D in four directions[6]:

- Scale – in many industries the overall scale of resources needed to develop new products has increased, forcing firms into either mergers with competitors or alliances.

- Complexity – the fusion between different areas of technology, and particularly the integration of IT into most aspects of business has increased the complexity of the product development process prompting a need for multidisciplinary R&D resources.

- Timing – faster market change, and the integration of formerly distinct national markets puts pressure on the time to market forcing firms to seek new organisational procedures and forms in cutting development lead times.

- Scientific nature – as the resources of firms grow and the innovation frontier is pushed forward by competition, so the lag between basic science and product innovation has reduced. Thus firms seek faster exploitation of new scientific discoveries, and are investing more in the basic sciences.

A key problem has been the perceived failure of certain aspects of UK high tech industry, as larger and better-resourced competitors have stolen a march in new product markets. Policy-makers, searching for a "non-interventionist" solution, and seduced by the US model, have turned to the universities for an answer.

2 Stoker, (1987)
3 Parkinson and Judd, (1990)
4 Bennet and McCoshan, (1993)
5 Office of Science and Technology, (1993)
6 Charles and Howells, (1993)

Central to these approaches is the belief that the university– industry technology transfer process can be localised Although heightened competition between localities to win and retain private sector investment arising from greater economic integration within the Single European Market leads to the question: why should UK industry not be able to get all the technology support it needs from overseas?[7] Such localised strategies, based on a few success stories elsewhere, can be divided into three main types:

- Developing university-based leading edge high-tech clusters, from a foundation of spin-off firms

- Building upon universities as magnets for attracting technologically advanced inward investment

- Using the university to provide local technology support for small and medium sized enterprises.

Because of the twin pressures from funders and users of research, including local development agencies who see technological innovation in local business as a means for reviving a flagging local economy, it is hardly surprising that this has been a primary focus of initiatives at the university/community interface.

1.4 Community Change

Communities and localities themselves have also exhibited substantial change in recent years of significance to their relations to universities. Geographical changes across the UK, have produced a shifting community landscape[8]. Key changes include:

- Suburbanisation of city centre activities such as retail and offices

- Inner city decay, with population decline through ageing and migration, economic and social malaise and physical dereliction

- Counter-urbanisation in the form of a relative population

Video nicey. Abid Hussein's Certificate in Business Information Technology helped him fast-forward to business success

shift from large cities to smaller towns and rural areas

- The economic success of the new towns being tempered by social problems and major redundancies

- Underlying the urban shifts, an inter-regional North–South divide, in terms of job prospects, social class, health, living costs and access to wealth.

These spatial developments are, in part, affected by various industrial dynamics:

- Massive reductions in the proportion of employment in manufacturing

- Elimination of certain traditional industries

- A sectoral shift towards services

- The rising importance of tourism.

Individual universities have had to adapt to this varied geographical backdrop. They have also been part of, and have shaped, some trends and helped with the amelioration of the adverse consequences of others. For example, some universities have sought to establish new campuses in derelict areas abandoned by traditional industries. Universities have also been part of the growth in service-employment in city centres, replacing suburbanising retail functions. They have also contributed to the service sector by attracting tourists to their facilities. Last but not least, some

universities have been part of city marketing strategies designed to attract mobile investment.

Outside of the economic sphere and within the community, the voluntary sector has been playing an increasing role in providing the supporting infrastructure for individuals with problems, replacing government in operational terms and contracting with government as new social partners in the implementation of government policies such as "Care in the Community". University relations with such bodies are increasing as their requirement for skills and support grows, and they replace public bodies as natural partners.

Finally, a characteristic of the 1980s and 1990s appears to be a declining level of involvement in formal party politics, with instead the rise of "issue" politics and membership of pressure groups. As such grass roots activisim grows, the major pressure groups and charities are also forging links with universities both as sources of research support and as membership and as an arena for debate. As the pace of change quickens one of the key roles of the university will be to contribute to debate as to the kind of place the community wishes to be in the future.

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7   Charles, (1992)
8   Champion and Townsend, (1990)
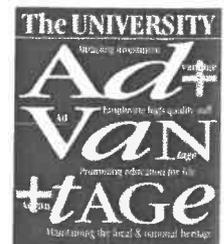
2 Defining the Local Community

2.0 Introduction: Multiple Definitions

The problem of defining a university's local community is both philosophical as well as methodological. Universities are not discrete entities separate from, but interacting with, some kind of spatially defined market. Rather, the university is embedded in many different types of "community": some local, some global; some overlapping and interacting, some barely recognising each other. In this sense the university is an essential part of local, national and global society, and forms part of how we define our society.

However, shifting to a more pragmatic and methodological level there are four aspects of universities' definitions of a local community we wish to discuss here:

* the relationship between an institution and its physical surroundings as influenced by historical and institutional context

* the different scales at which attributes or impacts of the university should be measured or assessed

* the different geographic scale or territory over which the university provides different types of "local" service

* the perceptions held by the institution and its management of the local community which is identified in institutional plans and through related activities.

2.1 Historical and Cultural Contexts

Different types of institutions can be used to illustrate the effect of
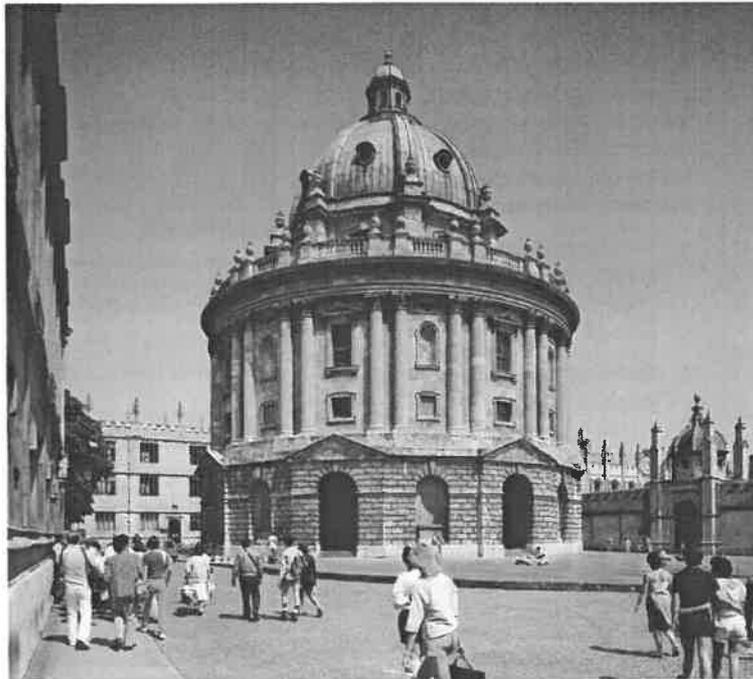
Smiles for the Camera. Some universities are major tourist attractions

their historical development upon the external (and perhaps internal) perception of their locality. Five broad types of university institution can be used to illustrate the heterogeneity of circumstances, although we recognise that this is not a typology that satisfactorily encompasses all institutions.

First we can begin with the historical university town, (Oxford, Cambridge, St Andrews), and one with a more recent history, Durham. These towns and universities present an interesting paradox in terms of local identity and community. In all four cases the physical form and function of the city centre has been dominated by the buildings of the university. In the case of Oxford, Cambridge and St Andrews the towns developed around the colleges, whereas in Durham the colleges colonised the historic core redefining it from an ecclesiastical and merchant community to academic one. The image and

perception of the place therefore becomes synonymous with the university, yet all four institutions are explicitly non-local in orientation, and tensions exist between local people and a detached, and in some senses walled-off, enclave or ivory tower.

We can counter this with examples, mainly of former polytechnics, emerging from a municipal college background where the place may not be closely identified with higher education, but where the university identifies closely with its town. In other words the sense of community is a clearly articulated mission to serve the town in which the institution is based, and where control formerly resided (eg, Coventry, Sunderland, Derby, Liverpool John Moores).

Between these two distinct groups lie the metropolitan "red-brick", or "civic" universities, including the ancient urban Scottish universities. Although often established with the

support of urban municipalities, the "civic" universities tend to be identified most clearly as regional institutions. Even in their early years, as the only universities within particular regions, the "civic" universities tended to attract and cultivate wider interests than those of the city cores. In Newcastle, for example, the historic industrial ties have been with the Tyneside conurbation and wider afield, (eg, Durham coalfield); links are also strong with the aristocratic and agricultural interests of rural Northumberland; whilst in terms of health care the university is a focus for training and, though the teaching hospitals, specialised health care for the whole northern region.

In contrast to the "civic" universities with their urban core locations but regional vision, many of the Robbins period campus universities remain somewhat detached from their localities. Out-of-town campuses and an absence of strong "rooting" faculties, such as medicine, combined with their small scale has tended to limit the local impact of such institutions, which often feel the need to strive to develop a community role.

Finally a special form of place-traversing institution is emerging, with some form of regional identity mobilised through decentralised campuses. An early example of this was the University of Ulster. Its latest proposal to establish a site on the peace line in West Belfast is emblematic of this quest for broadening access through camping on the doorstep of the requisite community.

Elsewhere the former Leicester Polytechnic, now De Montfort University, has dropped a metropolitan identity in order to expand into Milton Keynes and Peterborough. The former Newcastle Polytechnic has similarly become the University of Northumbria at Newcastle, at Carlisle, and now Longhirst (a country estate near Morpeth, Northumberland). Anglia was already established as a regional multi-site institution, although

interestingly both Anglia and De Montfort operate in "regions" that cut across government defined regions. As some former city-council-controlled universities reposition themselves as regional, and potentially networked, institutions, so the identification with a single town or city becomes subsumed in a new regional identity. We will return to this point in section 2.4.

2.2 Impact Assessment Scales

Defining what constitutes a local community represents a major challenge for any analysis of the economic impact of a university. In only a few instances will the local administrative area (district or county) constitute a meaningful entity for economic analysis. University employees will not necessarily live and work within this administrative area or spend the bulk of their income within it. Some universities are part of large and complex metropolitan systems where there is a greater likelihood of the expenditure being contained within the city region, while others are smaller towns with more limited services. Because of these problems in Chapter 3 we analyse employment data for 280 Local Labour Market Areas (LLMAs), each of which focuses on an employment centre but within which the majority of workers in that centre also reside.

However whilst employment-based impacts need to be assessed at the labour market scale, expenditure on goods and services may be more sensibly assessed at a different scale. Thus where a university is in a small labour market but adjacent to a major urban centre, expenditure leakage to the major city will be high (eg, Durham, Bath, Paisley, and Surrey at Guildford). In this case it may be more sensible to consider the larger functional regions, based on the conurbations, in which these smaller towns are enfolded.

In general however the definition of the area will depend on the rationale of the investigation, on whether a particular territorially defined body (local authority, TEC or regional organisation) is sponsoring or to be influenced by any study, or on the university's own definition of its community. The wider the area defined, the greater the absolute impact as leakage is reduced, but the less significant the scale relative to total economic activity.

2.3 Service Territories

Whilst we can define the local labour market area as the appropriate scale for assessing employment effects, it must be recognised that there are different geographic scales or territories over which the university provides different types of "local" service. Different services have different natural catchment areas, some highly local and others more extensive, depending on the degree of specialisation or exclusivity of the service and the distance customers are prepared to travel to make use of it. So whilst a university sports facility will usually have a very localised demand, technology transfer services may be regional or even international in scope.

So when discussing the concept of a local community, it is important to bear in mind that for different individuals within the institution, their "local" community may be very different in scale. It is also important to remember that only some universities operate particular services which have a genuine regional role, such as medical schools.

2.4 Perception of the local mission

Clearly any study of the university and community relation must take account of the university's perception of what constitutes the local community and over what scale its institutional plan is actually active. For this purpose vice-

chancellors were also asked to provide their own definition of their local community.

The institutional plans refer to specific local communities. In the case of old universities these may be laid down in the statutes. For example the statutes of the University of Southampton refer to the five counties of Dorset, Hampshire, Isle of Wight, West Sussex and Wiltshire. Several of the new universities were created as multi-site institutions and the distribution of these sites has determined their regions. For example, Anglia University has sites in Brentford, Colchester, Chelmsford, Norwich and Great Yarmouth.

As already noted above other new universities are staking out their regional turf through the creation of new sites. For example, De Montfort University in seeking to service an area in Buckinghamshire and Bedfordshire has in a sense embraced a locality where the existing universities, the Open University and Cranfield, are not locally oriented. Most new universities are also establishing franchise arrangements with further and higher education colleges and by implication defining their own catchment areas; indeed Oxford Brookes University's plan refers to a "travel-to-study area".

Many universities have a two-tier definition of their localities. For example, Warwick identifies the local area as embracing Coventry, Warwick and Solihull and its region as comprising the West Midlands; Sunderland University identifies Wearside as its locality and the North East as its region. Such distinctions may map onto the tiered structure of local government from districts and counties through to the standard regions defined by central government. A particular complication here is provided by the Training and Enterprise Councils which are increasingly important for many universities but which have their own geography; a geography which is poorly related to local-government boundaries.

Regional as distinct from local identity is a particular feature of universities north of the Severn/Trent axis. Here 79% of universities refer to the local as a sub region or region compared to 59% to the south of this line. In contrast 36% of universities in the south see the county as the locality, compared with 17% in the north. In their institutional plans, more universities in the north regard local linkages as a high priority and more place emphasis on supporting local institutions and serving their community. So not only is locality more narrowly defined in the south, but the strength of commitment also appears weaker.

Universities train all doctors and dentists

There are urban and well as regional differences in the nature and extent of university commitments to the locality. In this respect higher education institutions in London accord the lowest priority to their locality; their plans are also less likely to record support for local institutions – 54% of the plans of London HEIs mention this compared to 92% of those located in large metropolitan areas outside of the capital.

London institutions clearly have a problem because of such factors as: the geographical and administrative structure of London; metropolitan boroughs which inadequately reflect catchment areas for students; the absence of a London-wide authority; the dispersed structure of the metropolitan periphery confronting institutions

such as Middlesex, Kingston and Brunel universities; and last but not least, multi-site working.

As these methodological points relating to multiple definitions have been clarified the report now considers the local economic contribution of universities. First, in a "static" sense, Chapter 3 discusses the contribution in terms of impact and, second, in a dynamic sense, Chapter 4 discusses the contribution in terms of economic development.
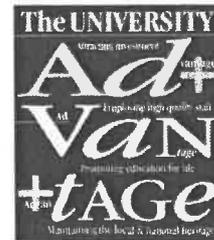
3 Universities and their Local Economic Impact

3.0 Introduction

Central to understanding the local economic impact of universities is a knowledge of the historical development and current geography of the UK HE system. This chapter sets the scene for the report by describing this geography. The relative distribution of HE employment within this system is then examined, followed by an assessment of techniques for measuring local impacts.

3.1 The Geography of UK Universities

Universities are present in a wide range of communities throughout the UK. Figure 3.1 describes this geographical spread. There are now few major cities or sub-regions in the country without a university. Some cities have several universities; indeed, if membership of the CVCP is taken as the criterion, Greater London contains 17 major institutions in higher education with *de facto* university status.

Expansion of UK HE in successive periods has not always been geographically even. Universities established in the 19th Century were to be found chiefly in the largest industrial cities of the Midlands and the north of England (eg, Birmingham, Manchester, Nottingham, Leeds, Liverpool and Newcastle). Expansion in the 1950s and 1960s occurred chiefly in smaller towns without a strong industrial tradition including many in the south and east of England (eg, Brighton, Chelmsford, Guildford, Canterbury, Norwich, Reading, Exeter). Many of those newly established in the North were often outside the main industrial areas (eg, Lancaster, York, Stirling) although the conversions from Colleges of Advanced Technology (CATS) did

have an urban industrial focus (eg, Aston, Bradford, Salford, Strathclyde).

The latest incorporations into the university sector from the former Polytechnics have been very widely distributed across the UK. Many cities with a long tradition of one university now have two institutions for the first time (eg, Leeds, Newcastle, Sheffield, Nottingham, Liverpool, Bristol, Leicester, Hull). A few new university towns have also been

created (eg, Plymouth, Bournemouth, Portsmouth, Derby) but fewer than in the last period of university creation through HE expansion. Increasingly, universities are becoming multilocational, which imparts a dynamic throughout the system, as new university status has allowed consolidation and centralisation of smaller HE colleges (eg, Staffordshire at Stoke and Stafford, Bournemouth at Bournemouth and Poole).

Table 3.1: Higher Education Employment as % Total Employment by Region, 1991

REGION	HE EMPLOYMENT	% OF TOTAL EMPLOYMENT
South East	41,002	1.0
East Anglia	12,295	1.6
London	36,841	1.1
South West	14,308	0.8
West Midlands	17,168	0.8
East Midlands	15,427	1.0
Yorkshire and Humberside	10,417	1.1
North West	20,601	0.9
Northern	10,452	1.0
Wales	8,710	0.9
Scotland	29,315	1.5
Totals	*227,166*	*1.1*

Source: Census of Employment (NOMIS) (1991)

Table 3.2: Higher Education Employment Change by Region 1981–1991

REGION	% 1981–87		% 1987–91	
	HE	TOTAL	HE	TOTAL
London	-3.2	-1.6	9.6	-7.2
South East	-1.9	5.8	12.4	1.7
East Anglia	52.5	8.6	20.6	6.5
South West	0.6	5.4	23.4	5.3
West Midlands	0.5	-2.2	16.2	2.3
East Midlands	7.1	2.8	-6.3	1.2
Yorkshire and Humberside	-19.1	-3.2	21.4	4.0
North West	-26.6	-4.4	17.7	1.1
Northern	9.8	-4.0	11.1	2.3
Wales	1.7	-1.3	12.4	4.2
Scotland	16.0	-5.5	19.6	6.5
Totals	*5.1*	*-0.2*	*12.6*	*1.4*

Source: Census of Employment (NOMIS) (1991)

Generally, the current distribution of universities throughout the UK, particularly following the most recent period of expansion, illustrates the concentration of institutions in the London and a more even spread elsewhere across the country as HEIs have occupied more dispersed positions across the UK urban hierarchy.

3.2 The Distribution of University Employment

The most immediate impact of the university on its local community is through its role as an employer. According to the 1991 Census of Employment, just over a quarter of a million people were directly employed in the HE sector in that year, representing 1.1% of all jobs in the UK. As a proportion of regional employment, the HE sector ranges from 0.8 - 1.1% although higher regional concentrations are evident in east Anglia (1.6%), due to the presence of Cambridge and East Anglia universities as large HEIs, in a low employment region, and Scotland (1.5%), which is generously endowed with a large number of institutions and high proportion of HE employment (Table 3.1).

Consideration of absolute numbers of university academic staff by region illustrates the dominance of the south east; however the region is the largest in terms of total employment and a concentration of academic employment could have been reasonably expected given the large number of institutions within London. More surprising is the high concentration of academic staff in Scotland (Figure 3.2).

Expansion in university employment has been an important growth element in regional economies throughout the UK, although as with the distribution of employment the growth has not been even. Table 3.2 illustrates that between 1987

Table 3.3: Higher Education Employment by Size of Local Labour Market Areas, 1991

	AREA	TOTAL EMPLOYMENT (THOUSANDS)	HE EMPLOYMENT AS PERCENTAGE OF TOTAL EMPLOYMENT
1	London	325	1.05
2	Birmingham	516	1.37
3	Manchester	447	2.59
4	Glasgow	410	2.10
5	Newcastle	301	1.29
6	Edinburgh	285	2.87
7	Leeds	274	1.26
8	Bristol	273	1.93
9	Liverpool	271	2.32
10	Nottingham	248	2.12
11	Leicester	204	1.92
12	Sheffield	199	2.77
13	Aberdeen	183	1.41
14	Stoke	170	1.11
15	Southampton	170	2.37
16	Coventry	160	2.66
17	Cardiff	159	2.28
18	Bournemouth	147	0.42
19	Norwich	142	1.17
20	Hull	140	1.56
21	Reading	140	1.80
22	Oxford	138	8.36
23	Bradford	129	1.17
24	Portsmouth	125	1.37
25	Wolverhampton	115	0.71
26	Derby	114	0.49
27	Cambridge	107	8.36
28	Brighton	107	3.25
29	Plymouth	103	1.44
30	Luton	103	0.54
31	York	100	1.84

Note: only two LLMAs with over 100,000 jobs (Northampton and Walsall) lack a University

Source: Census of Employment (NOMIS) (1991)

and 1991, encompassing the most recent period of expansion, the number of jobs in the sector increased by 12.6% compared to a growth in overall employment of only 1.4%.

In all regions, except Wales, the growth rate of university jobs exceeded that of total employment over the same period. In parts of the country with a long history of employment decline, notably Scotland (+19.6% in higher education), the North West (+17.7%), Yorkshire and

Humberside (+21.4%), universities provided a major source of additional jobs in the expansionary years of the late 1980s. In London, which experienced employment decline during this period, the increase in university employment (+9.6%) ran counter to the overall decline of jobs (–7.2%).

Taking the previous period of 1981–7, national employment declined by 0.2%, employment in higher education grew by 5.1%. Although this was a slower growth rate than was to occur in 1987–91, in some regions, notably in the North, Wales and Scotland, the expansion of the higher education sector was again evident against a background of severe employment decline. Nevertheless, some regions with overall job losses also suffered cutbacks in higher education, notably the North West, London and the South East.

Regional analysis conceals the significance of university employment to the local community within which people live and work. At a lower, Local Labour Market Area (LLMA) scale, Table 3.3 illustrates that jobs in the HE sector within universities are heavily concentrated in the UK's largest cities. LLMAs are defined as those areas in which the majority of people that live within them also work and shop there[9].

The ten largest labour market areas which contain just over a third of total employment (33.9%) account for nearly half (46.4%) of the jobs in the HE sector. In addition, 31 of the 33 local labour markets with an excess of 100,000 jobs all contain at least one university, encompassing 80 institutions in total. (The only exceptions are Northampton and Walsall). The remaining 247 local labour markets contain only 16 institutions between them.

In the few smaller LLMAs hosting universities, they not surprisingly dominate the local employment scene. The location quotient, which compares higher education's share of total
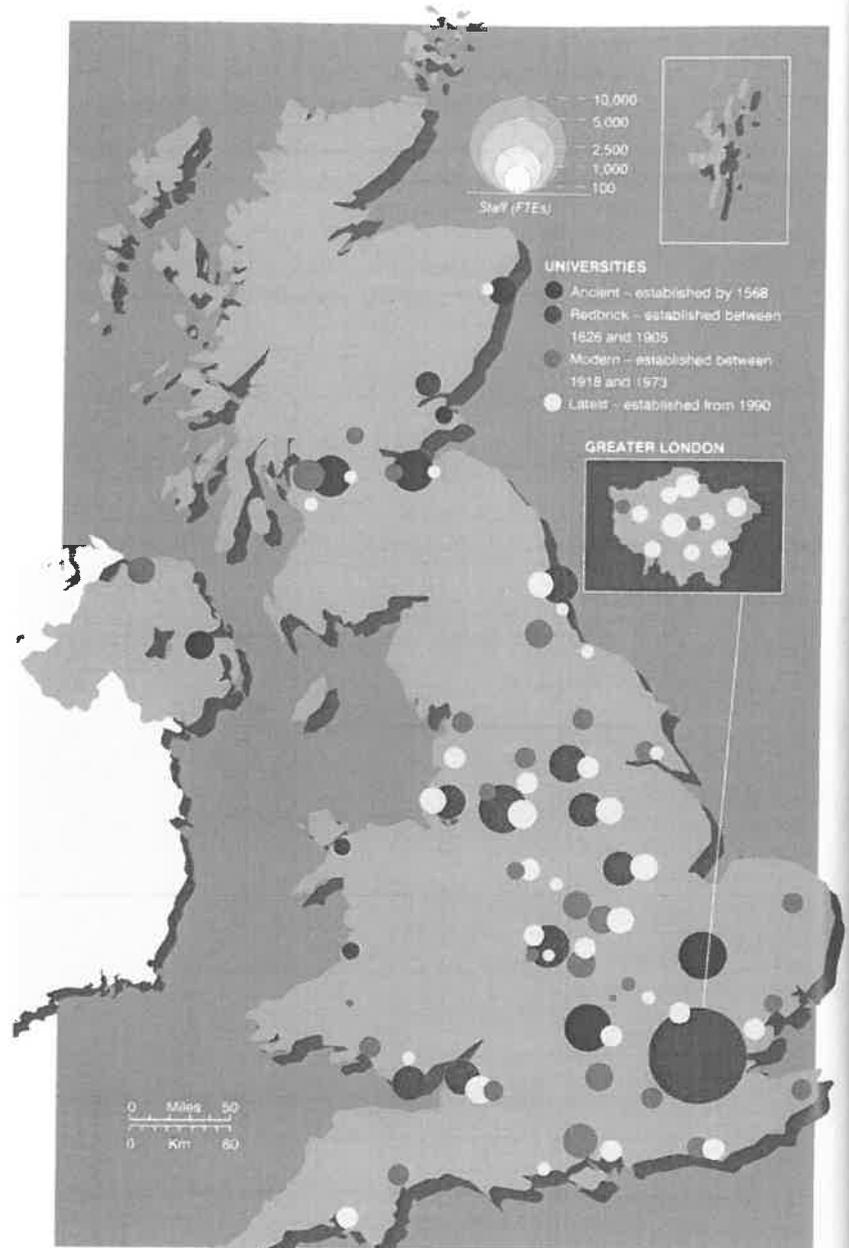
Figure 3.1: The Geographical Distribution of UK Universities 1991
Source: Coombes *et al* (1982), based on unpublished HEFCE data

employment in the locality with its share nationally (a quotient of 1.0 represents equal shares) highlights the classic university towns, including St. Andrews, Bangor, Durham, Lancaster and Loughborough (Table 3.4). But even in these places, higher education accounts for under 10% of total employment.

More significantly Table 3.4 shows that major cities such as Manchester, Edinburgh, Glasgow, Sheffield and Nottingham have a total employment in higher education

of twice the national average. Within this context, Cambridge and Oxford are distinctive in both being large employment centres *and* having a high concentration of university jobs within large universities.

Although at first sight these percentages might seem low, they have to be viewed in the context of the size of other individual employers. Whilst data on employment by sector are available, details on single

9   Coombes *et al*, (1982)

Table 3.4: Higher Education Employment Location Quotients and Total Employment by Local Labour Market Area, 1991

	AREA	LOCATION QUOTIENT	TOTAL EMPLOYMENT 000
1	St Andrews	8.77	14
2	Cambridge	7.95	107
3	Oxford	7.94	138
4	Loughborough	6.59	37
5	Bangor	6.02	21
6	Lancaster	4.64	38
7	Durham	4.32	33
8	Stirling	3.73	28
9	Aberystwyth	3.40	11
10	Dundee	3.24	77
11	Guildford	3.22	56
12	Brighton	3.09	107
13	Milton Keynes	3.03	83
14	Bath	2.93	61
15	Edinburgh	2.73	285
16	Sheffield	2.63	199
17	Coventry	2.92	160
18	Exeter	2.52	83
19	Manchester	2.46	447
21	Cardigan	2.44	8
21	Swansea	2.30	75
22	Southampton	2.25	170
23	Huddersfield	2.24	64
24	Colchester	2.24	71
25	Liverpool	2.21	271
26	Cardiff	2.17	159
27	Northampton	2.01	248
28	Glasgow	2.00	410

Note: Only LLMAs with Location Quotients greater than 2.0 are shown
Source: Census of Employment (NOMIS) (1991)

Figure 3.2: University Academic Staff by Region, 1991–92
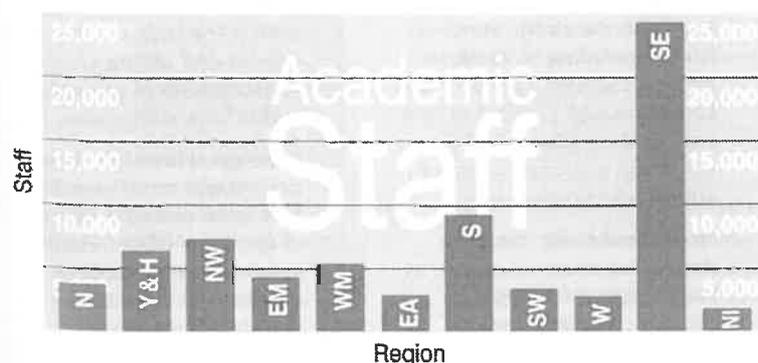
Source: HEFCE (1992), University Statistical Returns (1991–92)

employers are generally not available on a consistent basis. Survey data suggest that in Newcastle the two universities are the third and fifth largest employers in the city accounting for over 5,000 jobs between them.

In the North East, the five universities each employ over 1,000 staff. In comparison there are less than 30 private companies in the region that employ over 1,000 people. In Nottingham, the university is the eighth largest employer. So in terms of individual employers, the significance of universities is far greater than that suggested by their share of total employment.

3.3 Measuring the Local Economic Impact of Universities

The direct creation and maintenance of employment is the most obvious form of economic impact of universities on the local community. But the effects extend beyond employment to embrace the local purchase of goods and services by the university itself, its employers and by students. A number of attempts have been made to quantify these in impact studies of individual universities. We commissioned an independent review of these impact studies and this is included in full as Appendix II. This review highlights the many difficulties of economic impact analysis and these are summarised here.

The principal method of analysis is to use an economic multiplier which relates the direct expenditure of the university to secondary expenditure on the purchase of goods and services. In terms of employment, this means adding to the direct employment of the university an estimate of the extra jobs created or maintained in meeting university demand by locally produced goods and locally provided services. A comprehensive impact study for an individual university would involve the identification of the following elements:

- total staff expenditure

- non-wage expenditure
- equipment and capital expenditure
- student expenditure outside the university
- student union expenditure.

Before determining the second-round effects by the application of a multiplier it is appropriate to reduce these initial expenditures (the multiplicand) to take account of direct purchases outside of the locality. The scale of such "leakages" would depend upon the following factors:

- the proportion of staff living outside of the locality
- the expenditure of all staff and students outside of the locality (eg, shopping in adjacent areas)
- the proportion of students who are non-local (ie, generate new income to the locality).
- the capacity of local firms to support the needs of the university.

The collection of data to determine these reductions empirically in the multiplicand and the propensity to spend locally is possible using university records and sample surveys; but it is a particularly difficult undertaking especially with respect to student expenditure. Very few detailed studies of this type have been undertaken. Most have "borrowed" multipliers from other studies and/or used national income and expenditure data which have been applied to unadjusted figures for the multiplicand.

However, since these numbers are highly dependent on local circumstances, such borrowing is suspect – indeed can even render the results meaningless. Average multipliers across all of the components of expenditure used in previous studies ranged from 1.1 to 1.6, (ie, each initial £ of expenditure generates between a further £1.10 to £1.50 of local income) (See Appendix II).

Table 3.5: The Local Income Impact of Lancaster University 1987/88

	INITIAL EXPENDITURE INJECTIONS (£M)	ESTIMATED INCOME MULTIPLIER	INCREASE IN GROSS LOCAL INCOME (£M)	RATIO OF INCREASE TO INCOME INJECTION
Staff Earnings	18.36	1.20	19.26	1.05
Non-Wage University Expenditure	9.78	1.15	1.12	0.11
Equipment and Capital Expenditure	1.36	1.15	0.39	0.29
Student Expenditures	7.82	1.25	9.76	1.25
Student Union Expenditures	0.39	1.15	0.25	0.64
Total	37.71	—	30.79	0.82

Source: Armstrong (1994)

Table 3.6: The Local Employment Impact of Lancaster University 1987/88

A) DIRECT EMPLOYMENT AT THE UNIVERSITY			
	FULL TIME EQUIVALENT EMPLOYEES	RESIDENT AND WORKING IN DISTRICT	IN-COMMUTERS
Academic Staff	433	363	70
Academic Related Staff	131	97	34
Other staff	788	661	127
Total	1,352	1,121	231

B) TOTAL EMPLOYMENT IMPACT			
	(A) DIRECT EMPLOYMENT	(B) MULTIPLIER EFFECT	(C) TOTAL EFFECT ON JOBS	(D) RATIO OF COLUMNS C/A
Working in District	1,352	351	1,703	1.26
Resident and Working in District	1,121	335	1,456	1.08

Source: Armstrong (1994)

One of the most thorough recent analysis based on detailed data has been undertaken by the University of Lancaster and the results are shown in Table 3.5[10]. This is a relatively small locality with a high leakage of expenditure. After adjusting for leakage the authors calculate that an injection of £37.7m of university expenditure in 1987/88 led to an additional £30.79m of local income or a ratio of 0.82.

To determine the overall employment effect it is necessary to translate the adjusted income generated into jobs. This can be done by using national accounts data to determine the ratio of income generated by education, but spent outside that sector (chiefly in private and public services), to average output figures per employee. The results of these calculations for the

Lancaster example are given in Table 3.6. This suggests that an initial direct employment of 1,352 resulted in an extra 351 jobs, a multiplier of 1.26. However, if commuters are excluded, the direct employment effect is reduced to 1,121 and the extra jobs to 335 or a multiplier of 1.08.

Similar methods applied in an earlier study of Bristol Polytechnic suggested that between 2,100 and 2,400 full time equivalent jobs were created in addition to the 1,414 direct jobs, a ratio of between 1.6 and 1.8. This figure is higher because Bristol is a larger labour market in which a high proportion of residents are likely to live and work locally and be able to

10 H.W. Armstrong. (1994)

purchase services. Employment multipliers applied in other studies of large labour markets are predominantly at the upper end of the range 1.4 to 2.5.

The significance of these numbers can only be judged in terms of the size of the university relative to the total labour market. In the case of the two examples quoted (Lancaster and Bristol) the extra indirect jobs amount, approximately, to a further 1.0% on total employment attributable to the university bringing the figure for direct and indirect jobs to 5.9% and 2.9% of the total respectively.

Using HEFC employment and expenditure data it would, in theory, be possible to estimate the indirect effect of universities on each of the local labour markets identified earlier. However, without personnel and survey data for individual universities from which to calculate the scale of leakage of direct expenditure, and the proportion of staff not living locally, the value of such estimates would be extremely dubious.

While some of the coefficients entering into the multiplier can be derived from national data, others would need to be adjusted relative to local circumstances. We therefore think it is more appropriate for individual institutions to undertake their own analysis; accordingly Appendix II provides some guidance as to the appropriate methods.
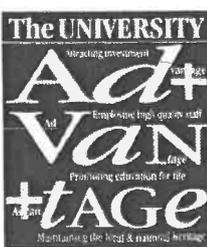
4 Universities and Local Economic Development

4.0 Introduction

Whilst the previous chapter has outlined the main issues in the direct economic impact of universities in their local community, there is a series of indirect relationships in which universities seek to contribute to dynamic changes in the local economy.

Typical of these are support given to local companies in the form of technology transfer, the emergence of new firms from university activities, work-oriented training, and support for economic development agencies involved in activities such as inward investment. Universities also provide particular non-educational services, some in the area of technology development and consultancy, but also in sectors such as tourism.

Given the rising importance of services like tourism, and its role in economic development in the form of place marketing, this is given a focus also at this point. This chapter will therefore outline the major dynamic interactions between universities and their communities, focusing on the trade-offs and conflicts between local action and the wider international context within which universities operate.

4.1 Universities and Technology Transfer

Support for technology transfer is one of the main external linkage activities of the universities, and is identified in mission statements as perhaps the most important issue in terms of local interaction. In this section we examine this point rather critically, and whilst acknowledging the important place of technology transfer in

Figure 4.1: An Interactive Model of the Innovation Process The Chain-linked Model

Individual firms and productive sectors at a more aggregate level
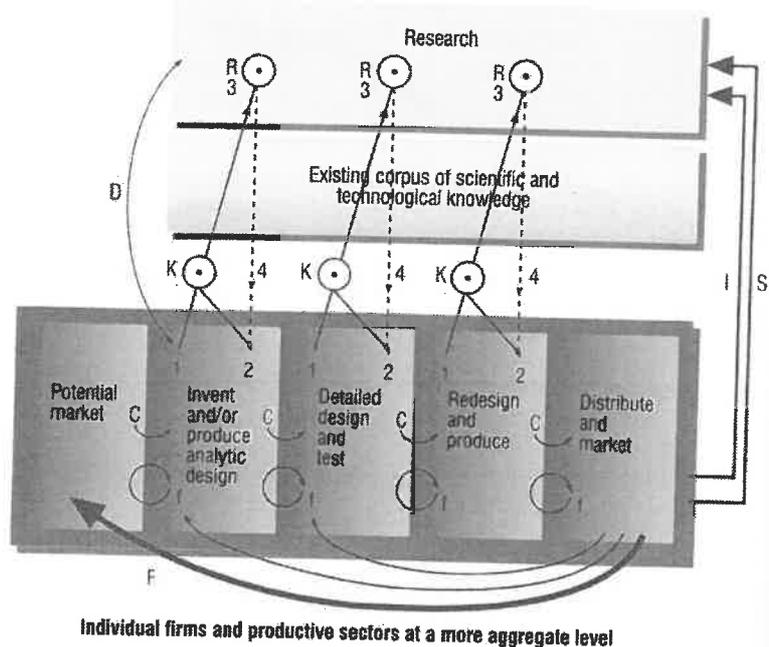
Symbols used on arrows in lower boxes:
C = central-chain-of-innovation
f = feedback loops
F = particularly important feedback

Vertical links:

K-R: Links through knowledge to research and return paths. If problem solved at node K, link 3 to R not activated. Return from research (link 4) is problematic – therefore dashed line.

D: Direct link to and from research from problems in invention and design.

I: Contribution of manufacturing sector to scientific research by instruments, machine tools, and procedures of technology.

S: Financial support of research by firms in sciences underlying product area to gain information directly and by monitoring outside work. The information obtained may apply anywhere along the chain.

Source: Adapted with minor changes from Kline and Rosenberg, (1986)

the mission of the university, we question the importance and the type of initiatives developed at the local scale.

The increased attention paid to universities' role in technology transfer in recent years can be seen to have emerged from an intersection of three separate trends[11].

- Firms' technology base has become more complex and diverse and firms have therefore turned to external sources of technology and knowledge to maintain competitiveness.

- Development prospects at the local level have been constrained since the 1970s as

11 Charles, D. R. and Howells, J. H. (1992)

Figure 4.2: University Research Income as % Total Income 1980/81–1988/89 ("Old" Universities only)

A) SOUTHERN UK

Legend:
- UK TOTAL
- Oxford/Cambs
- London
- Rest SE/EA
- East Midlands
- South West

B) NORTHERN UK

Legend:
- UK TOTAL
- Scotland
- Wales
- North
- West Midlands
- North West
- Yorks/Humb
- N Ireland
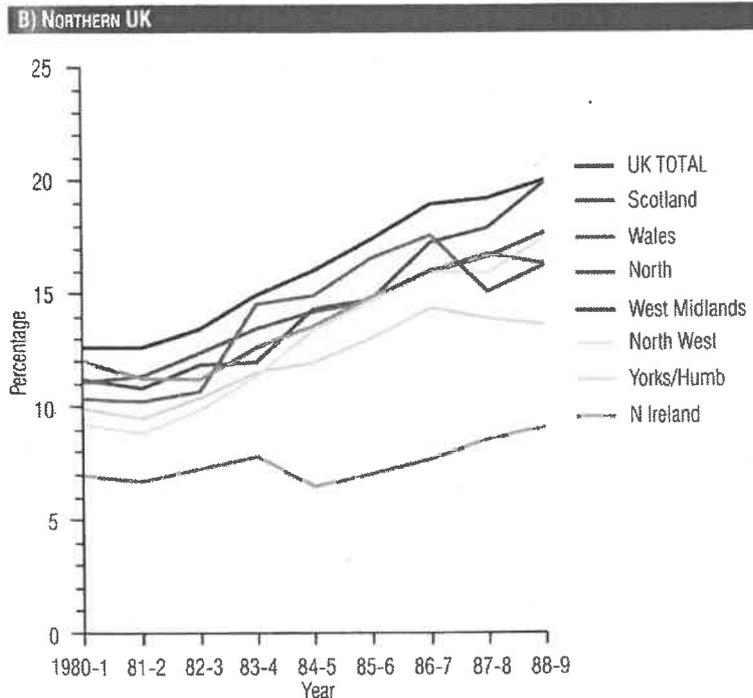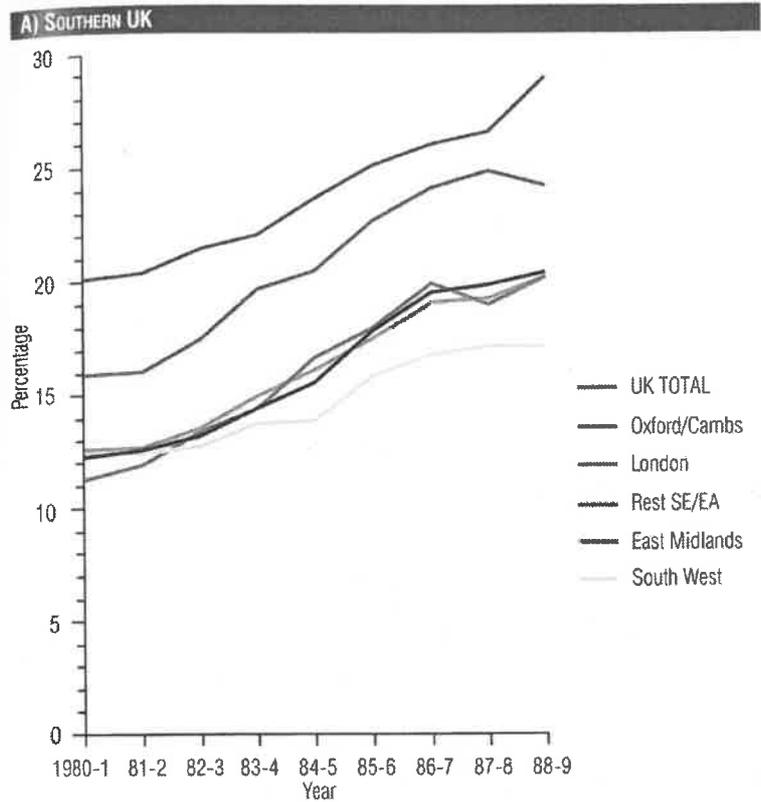
Source: Compiled from UGC annual data

employment in large branch plants has shrunk, leading policymakers to shift attention to the creation and support of local SMEs, especially in high-tech growing industries.

- Universities have been the beneficiaries of significant research funding from the public sector, which policy-makers, not unreasonably, expect to see leading to an

enhanced industrial capability in the UK. Both policy-makers and universities are also keen to see universities increase earnings from the sale of technology and related services.

Whilst we would argue that there are other very good reasons for linkage with industry (such as access to industrial equipment and expertise, industrial scale plants, new problem definition, personal financial gain, etc) in our focus here on local "technology transfer" it is a combination of the indigenous economic development and external income arguments that is most relevant.

But before outlining policies and practices within the universities, two more fundamental questions need to be examined. First the concept of technology transfer needs to be unpacked and clarified and, second, the global local tension in such "technology transfer" must be clarified.

Technology Transfer

The term "technology transfer", although a useful label for a wide range of activities, is increasingly seen as intellectually, if not politically, incorrect. Its meaning, in the narrowest sense, can be taken as referring to a process where a "piece" of "technology" in a codifiable form is sold, licensed or otherwise passed on from one party, the university academic, to another, a firm.

Implicit in this definition is the traditional concept of an invention, whether a widget, an instrument or a software programme, that can be licensed to a firm for commercial exploitation. Whilst it is the case that such things happen, although not always in a straightforward manner, and that some universities earn significant sums from such activities, this is not a typical form of exchange of technological information[12].

In reality scientific and technological knowledge flows two ways between universities and industry, much in a non-commercial form, through

12 Macdonald, (1983)

learning-by-doing or by the movement of individuals. Thus if the linear model of innovation is dead, and probably never truly represented more than crudely a few specific innovations, we can look to models such as Rosenberg's chain-linked model (Figure 4.1) as bearing a closer resemblance to actual scientific practice.[13]

In this model the industrial innovation project cycle can be linked at all stages with an underlying corpus of scientific knowledge both drawing on this knowledge to solve problems, and stimulating new scientific discoveries through identifying anomalies and providing the tools for research.

Moving on from this framework, we need to identify the main processes by which scientific and technological knowledge in the universities is exchanged with knowledge from industry. Four main mechanisms can be identified:

- Research links and collaboration, whereby the HEI is asked to generate new forms of information, or carry out specific research tasks

- Information transfer in which existing knowledge or information is passed on in a formal sense

- Knowledge transfer via personnel mobility in which there is movement of staff or students carrying with them formal and tacit knowledge

- Spin-outs and externalisation, where a body of knowledge in an HEI is transferred to the private sector or some other organisation by the wholesale transfer of a group of people over an organisational boundary.

Whilst by no means a perfect classification, this does present a practical means for grouping and representing different forms of relationship, and this will be used below in outlining the key issues in localised technology transfer.

Global–local Linkage

Having outlined the processes, the next question in the context of this study is to assess the local dimension of these processes. Some have an implicit local impact, whilst others will tend to be far less localised. In many respects there is a fundamental conflict for universities in the case of their scientific and technological research, between operating at a globally excellent level and assisting local firms with their problems. University staff have a body of knowledge and experience ranging from elementary and practical knowledge, which may be the core of undergraduate degrees, up to leading-edge knowledge of a specialised and highly specific nature. In terms of research income and ratings it is only the latter of these that matters, and so researchers will seek out new problems and collaboration with firms that are also on that leading edge.

In contrast local small firms with problems are much less likely to be able to engage with this kind of challenge, and will be less able to pay for support. Consequently there is a probable mismatch between what the university academic is interested in, and what a local small firm needs.

Such is the classic argument of policy-makers, who then suggest that the universities should be encouraged to step back from esoteric research to that which is relevant to immediate industrial needs.

There is a logical flaw in this recommendation however, as the aim of universities is to be aware of the global state of science, to advance that for the benefit of the nation if not humankind as a whole, and to pass on this knowledge to the next generation. Thus even if local firms are not able to absorb the state-of-the-art, a nation in which universities did not operate at the leading edge would be unable to improve its position as a trading nation.

Many large national or even foreign firms are willing to sponsor

research in UK universities, and have a spending-power which may be absent in the local economy. In this universities may add to the positive trade balance in intellectual property for the UK.

At the local scale, the universities can contribute more to local firms in terms of knowledge by concentrating on the global, as they are then able to introduce new ideas and concepts. However, there is a funding gap which needs to be bridged by external funding, as small-firm contracts are rarely as profitable or beneficial to the mission and performance of the university as those of larger firms.

Research Links

Research grants and contracts can be an important source of income to a university, and are perhaps the primary form of direct technology transfer, although only a relatively small part of the total research grant income is directly supported by industry.

During the 1980s the old universities saw a massive increase in income arising from such contracts (Figure 4.2) with an increase in the mean percentage of all income (rising from 12.7% in 1980 to 19.8% in 1990–1). Unfortunately similar data are not available for the former polytechnics, except in the year 1991–2. Analysis of the relative levels of research income shows considerable regional variations in the research-contract income as a share of total income.

Although standardisation for different types of institution is difficult, in terms of disciplinary composition, size, age, etc., universities that appear on the surface to be of a similar nature in different regions have a diverse performance. Generally those in the South East perform better than those in the North, and the two Northern Ireland universities have by far the lowest research income levels of any region.

It is important however to differentiate funding sources

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13 Rosenberg, (1992)

Table 4.1: Total Research Income Rank by Institution, 1991-92

	Total Research Income Rank by Institution (£000)		Total Research Income Rank by Institution (£000)		Total Research Income Rank by Institution (£000)
London	260,179	Bath	7,994	Nottingham Trent*	1,186
Oxford	63,626	Durham	7,955	Central Lancashire*	1,126
Cambridge	48,540	Kent	6,890	East London*	1,107
Edinburgh	37,054	Hull	6,831	Paisley*	1,088
Wales	36,232	Brunel	6,051	Kingston*	1,029
Glasgow	35,548	Lancaster	5,857	Oxford Brookes*	994
Manchester	28,026	Essex	5,657	Liverpool John Moores*	976
Birmingham	25,001	Bradford	5,200	Glasgow Caledonian*	930
Bristol	24,701	Exeter	5,177	Northumbria*	892
Liverpool	23,408	City	5,045	Coventry*	852
Leeds	22,007	St Andrews	4,902	Leeds Metropolitan*	845
Southampton	20,747	Keele	4,752	Napier*	845
Newcastle	20,220	Stirling	4,491	Wolverhampton*	703
Nottingham	19,781	Plymouth*	4,365	Huddersfield*	676
Sheffield	18,969	Salford	4,127	Robert Gordon*	666
Warwick	16,840	Ulster	3,886	Teesside*	554
Strathclyde	16,542	Middlesex*	3,539	Manchester Business School	541
Leicester	12,723	Aston	2,991	Central England*	479
Belfast	12,472	De Montfort*	2,924	Staffordshire*	473
Dundee	12,363	Manchester Metropolitan*	2,818	Bournemouth*	463
UMIST	12,211	South Bank*	2,661	Sunderland*	461
Aberdeen	11,587	Greenwich*	2,185	Anglia*	460
Reading	11,179	Portsmouth*	1,875	Dundee Institute*	295
Loughborough	11,042	Westminster*	1,706	Guildhall*	280
York	10,793	West of England*	1,520	Luton*	241
Sussex	9,942	Sheffield Hallam*	1,517	Humberside*	120
Surrey	9,377	North London*	1,486	Derby*	42
Heriot–Watt	9,275	Hertfordshire*	1,291	Thames Valley*	40
East Anglia	8,795	Brighton*	1,231		

* "New" Universities

Source: Universities Statistical Record, HEFCE, SHEFC

within the general field of research contracts. One of the main areas of growth is in EC contracts involving public money but with industrial partners, a growth which has been associated with a relative shift away from similar research council and related UK government schemes for leading departments.

Table 4.1 shows research income from industry as a proportion of total research grants and contracts for both old and new universities for 1991–2. Comparing research income from industry with that from research councils as shown in Figure 4.3, reveals the variety of performances amongst institutions. Some are relatively specialised on research council funding such as Oxbridge, Edinburgh, Essex and Sussex, whereas others are much more industrially oriented (Heriot-Watt, Nottingham, Dundee, Surrey and Warwick). The majority of "old" universities fall into a general group with research council income of over 3% of gross income and industrial funding of between 1 and 3%. The "new" universities tend to have very low income on both of these measures with the exception of Westminster, Plymouth and South Bank who are successful with industry, but have relatively low research council income.

Out of all of this, research contracts with local industry for

most institutions are relatively small scale and few in number. Generally contracts are placed by the larger firms, usually on a national basis, and previous research has shown that such relations are developed with universities with a particular specialism, regardless of region. Figure 4.4 shows the results of asking firms for their university links in a postal survey. Most links were inter-regional. One area where local links can be significant however is where firms have been spun off from the university, and sub-contract significant amounts of research back to the host department. This may account for at least part of the success of Heriot-Watt in industrial research income.

More relevant to this study perhaps are research-related services, where rather than carrying out research for firms, universities allow firms access to particular research equipment that may be expensive for smaller firms to afford. Firms needing relatively quick results would also tend to look only to the local university rather than search more widely.

Examples of this are many, and are typically developed at a departmental level, although the University of Durham for example has established a company, (University of Durham Industrial Research Laboratories) based in its science park, to provide access to specific equipment for external, mainly local, firms. The scale of some of these initiatives is very large, and so a facility such as the Honda-sponsored wind tunnel at Imperial College is of national and international significance.

Information Transfer

Moving from research-based activities to the transfer of existing knowledge, particularly in the form of consultancy activities, there is a greater sensitivity to local needs and an ability for the university to respond to the specificities of the local economy. Typically consultancy involves little in the way of new information gathering, but

Figure 4.3: Research Income from Industry and Research Income from Research Councils
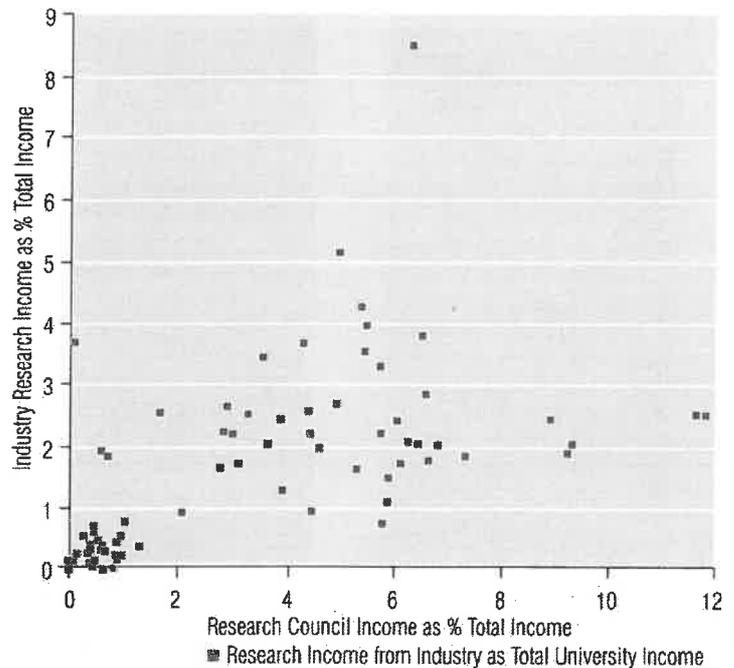
Source: Universities Statistical Record (1992), HEFCE and SHEFC (1992)

instead consists of advising firms on the basis of previous experience. Such activities usually involve much lower payments, as they are of shorter duration and make no demands on capital equipment, and therefore are more affordable for small firms.

Typically there are two approaches to consultancy in universities. The traditional model, exemplified by Cambridge, is to allow individual academics considerable freedom to engage in consultancy on a private basis, with the university taking little or no interest in what occurs, beyond ensuring that there is no liability on the part of the institution[14]. The argument for this is that the institution will benefit more from the additional contacts generated by the consultancy work via subsequent research contracts etc, than the purely financial gain, and that the volume of consultancy would decline if the individual reward was appropriated by the institution.

In contrast to this have been moves by other universities to specify in the employment contract conditions of academic staff that all consultancy work should be performed via the institution; that the institution will

take on professional liability insurance, and that some agreement is made with academics for sharing the rewards, given that some of this work is performed out of normal work hours.

The form of contract relationship here is very important for the coordination of local linkage, as the highly individualistic approach inevitably results in the absence of any central gateway into the university, other than perhaps for research contracts. Individuals will build up their own networks of clients, and there will be little sharing of information on the capabilities of staff or the referring of companies on to other specialists.

Also, without a central coordinating point, any strategy to increase the intensity of the relationship, from a short casual consultancy to collaborative research or student placements etc., will be purely on the responsibility of the individual academic rather than being shared with a central industrial liaison office. The more interventionist approach permits the university to manage better the relationship with its local firms, allowing the

14 Segal, Quince and Wicksteed. (1988)

Figure 4.4: University and Public Research Contacts of 24 Chemical Firms

Source: Charles and Howells, (1993)

to the capabilities of local firms. It is important to recognise the highly specialised nature of the economy, with many technology-based products being supplied by relatively few firms globally. Hence the most appropriate licensees are unlikely to be local unless they are already collaborating or are spin-offs from the department concerned.

Universities have often spent considerable management time on these kinds of initiatives, especially since the abolition of the automatic granting of negotiating rights to the British Technology Group. Sometimes the work is carried out as part of a general exploitation company, but in other cases, eg, Impel at Imperial College, a new firm is established for this task.

However for most institutions the payback is fairly uncertain unless there is a very large research budget, and there are economies of scale in external contractors such as BTG, or consortia of universities such as in the RTCs. Also, as most of the big financial windfalls come from deals with foreign companies, rather than local firms, an international focus is necessary for an adequate payback.

Personnel-based Exchanges

The main form of personnel-based exchange of knowledge is of course via the graduate, and as part of this, any project work carried out during the degree course. There will be an element of local transfer of knowledge through graduates that remain in the locality; in addition a high proportion of course-work-based industrial contact, such as sandwich courses, is local from practical necessity.

Leaving this aside for the moment, and focusing on more formal and ongoing linkages, there are two forms of link we wish to highlight. First is the secondment or exchange of staff between university and firms, in both directions, and second is a public initiative, the Teaching Company Scheme.

creation of databases to be used in the marketing of new and existing services.

On a more focused basis, some universities have set up consultancy activities to address specific markets, differentiated from research centres. Sheffield Hallam for example has established an Advanced Manufacturing Technology Advice Centre to advise local SMEs on various aspects of manufacturing. Financial support from the DTI

covers two thirds of the normal costs of the service for small firms.

A much more specific form of information transfer is the licensing and exploitation of intellectual property, usually arising out of publicly funded research. Industry-funded research usually has predetermined arrangements for assignment of intellectual property.

These initiatives are usually non-local due to the difficulty of matching the product/invention

Whilst universities have been seen as traditionally operating in separate labour markets from industry, there has been more considerable interchange in recent years both in permanent moves of staff and in secondment. This works both ways, with schemes to encourage university staff to spend time in industry, as well as "visiting professor" schemes for industrialists.

At postgraduate level there is a well established system of industrial sponsorship, although this tends not to be very local in nature, and often follows on from research links. More localised relations are however a feature of the Teaching Company Scheme which aims to foster a close working relationship between the firm and the university.

In a Teaching Company project, the appointed researchers work in the firm with frequent supervision by the university where they are registered for a postgraduate degree. The research is oriented towards solving a problem in the firm, although there has to be some relevance to the academic department involved. Inevitably the links are highly local as the Teaching Company Associates, as they are known, must make frequent journeys between the two organisations.

Spin-outs and Externalisation

Perhaps the most celebrated form of technology-based external impact of universities, and one with a distinct local image, has been the area of spin-offs and science parks. In the early 1980s, with the rising interest in small firms and entrepreneurship, a contagious rash of science parks spread across the UK university map. The phenomenon has come in for some criticism in recent years[15] but despite this our survey revealed that it remains a key area of policy.

A majority of respondents revealed the existence of campus companies and spin offs. These may be split between those that are genuine spin-offs, where academic staff leave the university and set up an independent company, and campus companies where the university retains a major stake in the firm.

Some of these companies are now becoming quite significant in scale. Two of the larger campus companies are the University of Leeds Innovations Ltd (ULIS) and Salford University Business Services Ltd. (Figure 4.5). ULIS has a turnover now of around £5 million, and this is despite spinning off two subsidiaries, one of which, GMAP has a £2 million turnover itself. SUBS has 75 staff and a turnover of £11.5 million offering a wide range of consultancy services.

Fully fledged spin-off firms are not a particularly new phenomenon, and the Scottish defence optics firm of Barr and Stroud illustrates this, established by a Glasgow University professor over 100 years ago. Latterly the spin-off phenomenon has been especially associated with Cambridge[16], but a number of other spin-off firms were listed in the survey responses. Typically spin-offs are in the consultancy or software field, although there are a number of specialised firms in the biotechnology field. Some of the biggest recent spin-offs are IT based, including MARI in Newcastle, and Praxis in Bath.

Science parks are now an accepted feature of the university industry landscape, after a rapid growth in the early 1980s, (Figure 4.6). In spite of some cynicism and a few disappointing examples, institutions without science parks are still seeking to launch developments, and many of the more successful schemes are expanding.

Although usually presented as an element in technology transfer policy, science parks are essentially real estate developments, and beyond a few special cases it is the quality of the buildings and the environment rather than the university's services that sells the space. As some might put it, "the lake is more important than the university technology transfer office".

Extant science parks fall into a number of categories, and their local impact varies accordingly along two dimensions: the scale in terms of jobs provided, and the additionality in terms of new jobs and firms that would not have been created otherwise. Some score well on both of these dimensions, such as Heriot-Watt Research Park, which over a period of twenty years has provided a home for a number of research institutes spinning out of the university, and acted as a site for inward investors into Scotland. Others such as the Surrey Research Park have probably had less of a dynamic impact, despite being one of the largest developments, since the park is situated in an area with very high demand for such accommodation anyway.

The largest parks, such as Cambridge, Heriot-Watt and Surrey are of anything above 200,000 square feet, with free-standing buildings for major multinational tenants, etc. Below this category there are a host of medium sized parks, often in the form of multi-tenant buildings or terraced units. Many such developments have been externally initiated, especially by English Estates, the WDA and Scottish Enterprise, with the university adding its name and some management involvement. These developments are rather mixed – some become simply high grade office/industrial space, with a relatively low degree of interaction with the university.

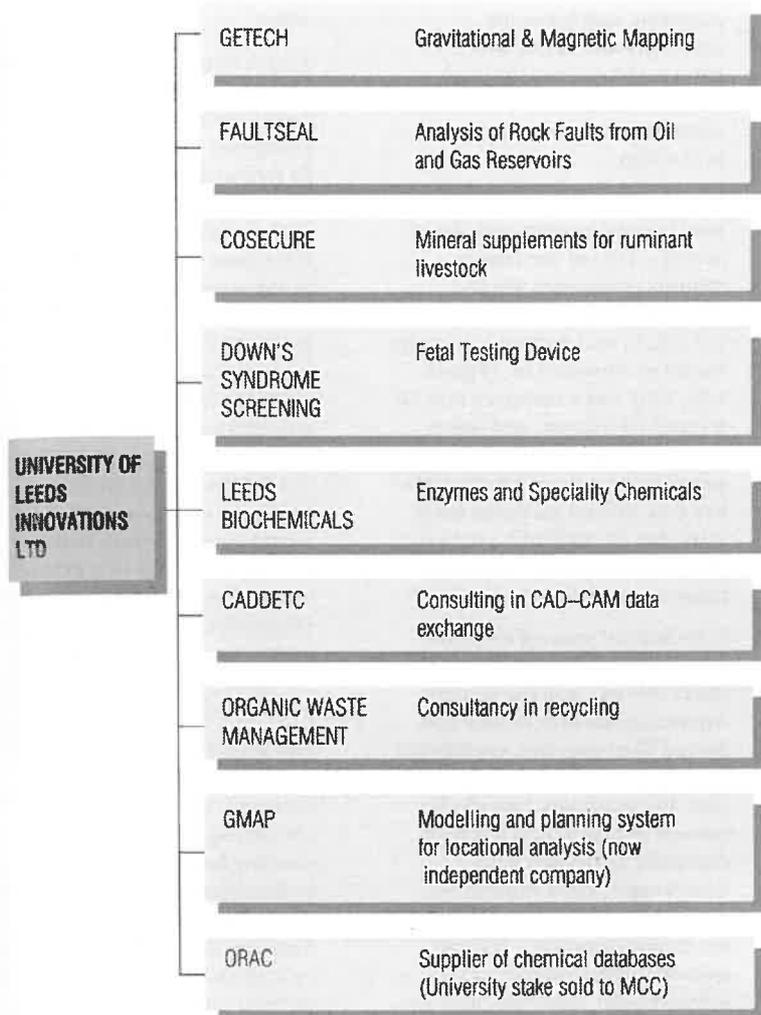This is particularly the case in areas with a relatively undeveloped commercial property sector. Others are dominated by university and public-sector-based tenants, with little real private enterprise.

Finally there are some very small incubator units, where the real impact is very limited, and accommodation is basically

15 Massey, Quintas and Wield, (1993)
16 Segal, Quince and Wicksteed, (1985)

Figure 4.5: Campus Companies in Leeds

UNIVERSITY OF LEEDS INNOVATIONS LTD	GETECH	Gravitational & Magnetic Mapping
	FAULTSEAL	Analysis of Rock Faults from Oil and Gas Reservoirs
	COSECURE	Mineral supplements for ruminant livestock
	DOWN'S SYNDROME SCREENING	Fetal Testing Device
	LEEDS BIOCHEMICALS	Enzymes and Speciality Chemicals
	CADDETC	Consulting in CAD–CAM data exchange
	ORGANIC WASTE MANAGEMENT	Consultancy in recycling
	GMAP	Modelling and planning system for locational analysis (now independent company)
	ORAC	Supplier of chemical databases (University stake sold to MCC)

Source: University of Leeds (1993)

restricted to the needs of a handful of university spin-offs.

In terms of the evaluation of university science park developments, two main conclusions can be presented. First, in many cases the real involvement of the university is low, but as a successful real-estate development the university gains either financially or in reputation by association, for a relatively small outlay of management time. Second, the net employment impact is probably not great due to the displacement of jobs from elsewhere in the locality, and the principle of separation of R&D from manufacturing is probably not a good model for the future competitiveness of UK industry.

Institutional Mechanisms

Some institutional mechanisms for supporting technology transfer have already been mentioned above, but there are some strategic initiatives and links that go beyond the particular modes of interaction outlined.

General university exploitation companies have been established in a number of cases to handle a range of types of interface. In some cases they are built upon the existing industrial liaison office and are academic services with some additional commercial responsibilities, whereas in others a new company is established with private sector staff solely to handle the non research-council relations.

Outside individual universities, consortia have emerged to address issues of regional scale, in some cases prompted by the Government's Regional Technology Centre programme. One such successful example of regional collaboration is in the North East with HESIN (Higher Education Support for Industry in the North) linking together all the local universities, and the RTC North which provides a more commercial interface. RTCs exist in other regions, but some have recently collapsed due to the lack of any ongoing core funding and difficulties in finding project funding.

On an international, but localised, scale, the universities of Portsmouth, Southampton and Caen have established a European Economic Interest Grouping to collaborate in areas of regional technology transfer on both sides of the English Channel.

Overall it is easy to be critical of the local effects of university technology transfer initiatives, as many are rightly oriented towards the national or international scale. But the concept of localised industrial support has been somewhat hijacked by the science park and spin-off firm lobby, which is unfortunate as much more important work can be achieved by the normal activities of the university, through informal networking, through student placements, staff secondment, consultancy initiatives and so on.

Frequently, however, there is a lack of central appreciation and coordination of such efforts. Intermediary and regional initiatives can be useful in this context, but a more important issue is perhaps the more general culture and reward system in the universities. If staff were as rewarded for the less spectacular but useful work with local industry, as for the more financially remunerative large firm grants, then there would be a shift in orientation. But this is perhaps more an issue for the funding bodies.

A parallel problem is the unwillingness of local small firms to make use of their local

universities, often because non-graduate managers see universities as aloof and non-pragmatic. We would argue that this is not the reality of the service provided to firms, but the problems of perception remain, and probably need to be resolved through a more general approach to business training and awareness rather than through technology transfer, as is discussed in the next section.

4.2 Non-technology Support for Local Industry

University support for local industry is normally considered in terms of science and technology, but is not exclusively so. Not all firms are engaged in technical activities, and non-science university departments also have relationships with industry. Management schools are an obvious example here but firms may also look to universities for assistance in any vocational discipline, such as law, land management, languages, or architecture.

Vocational training is dealt with in a later section of this chapter, but many of the technology transfer concepts can also be applied to the transfer of expertise and management knowledge also. Research projects on management questions, consultancy, the sale of management software tools, secondment, and spin-off consultancy firms are all applicable to the management arena as well as technology.

This is often less clearly identified by universities than the technology transfer mission, but the two may be highly inter-dependent, as the decision to invest in technology depends as much on an awareness of management as on the need for particular technology-based strategies and the competitive position of the firm.

Certain management schools have taken the development of local small firms as a special focus of their activities, including

Figure 4.6: Science Parks in the UK
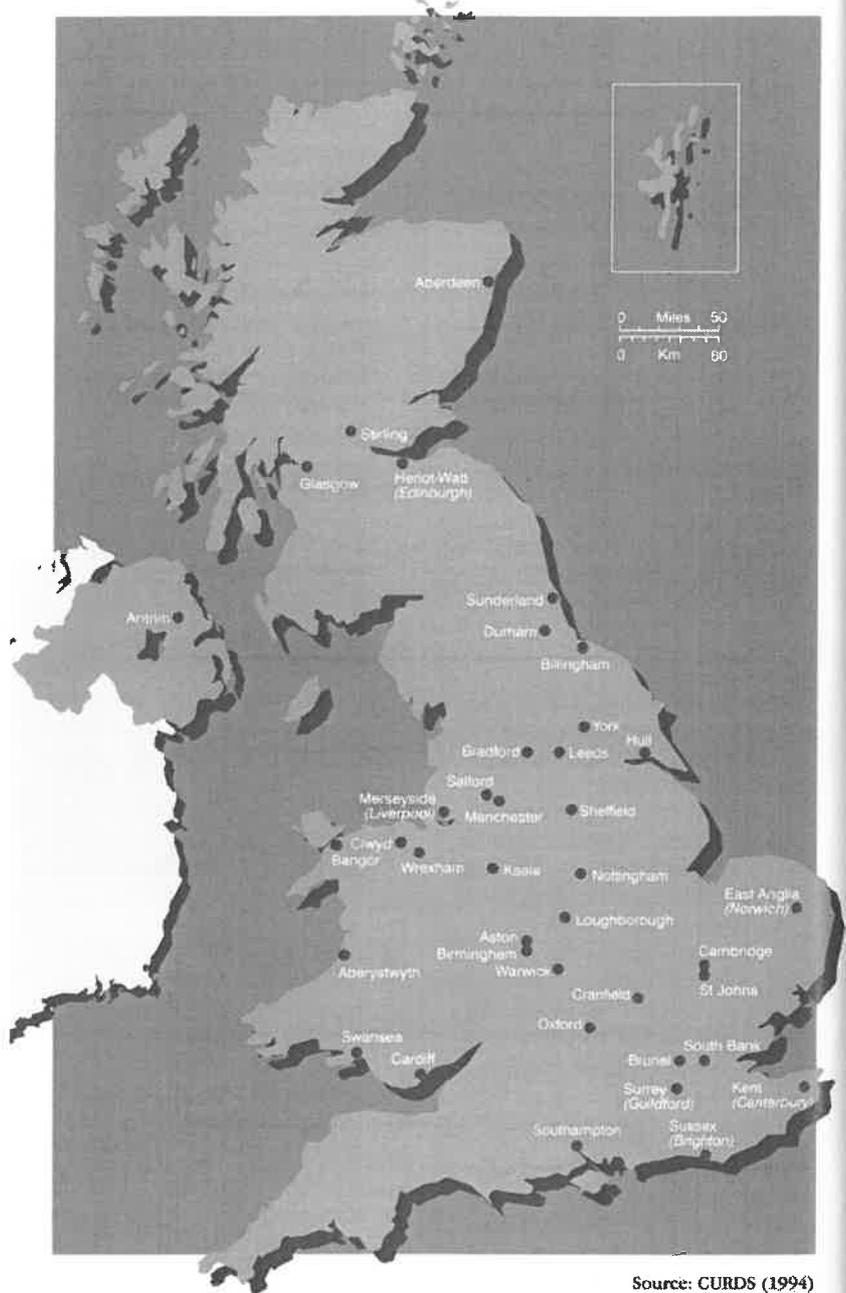
Source: CURDS (1994)

Durham and Bournemouth, although as with technology fields there is often a trade-off between the desire to serve local markets in a pragmatic and proactive manner, and the desire to gain research council support and perform well on research selectivity measures.

4.3 Inward Investment

The decision by inward investors to locate in an area is necessarily based on uncertainties. Only the

very largest corporations obtain large amounts of comparative data for alternative locations and even then they tend to test a location with a relatively small investment before committing themselves. For smaller corporations their investment decision is, more often than not, based in large part on uncertainty and perceptions, rather than hard data.

It is this uncertainty that promotional agencies seek to exploit in attracting inward investments. Few inward

investment agencies are able to communicate in sufficient detail to potential inward investors the scientific and research strengths of local universities. Few have even considered the nature and extent of the labour market skills which potential universities present in the form of graduates, postgraduates and staff.

Several authors have argued that new models of decentralised corporate organisation are emerging and that some manufacturing branch plants are gaining more autonomy and more R&D activities through a process of "upgrading". Such branch plants are increasingly seeking close links with universities, perhaps not for direct research links (despite much wishful thinking), but in order to ease the difficulty or recruitment.

Several universities identified the support for inward investment as part of their industrial mission, and formal intermediary organisations such as HESIN, science parks, etc. collaborate with regional and national inward investment agencies in preparing tailored packages for investors with particularly technical requirements. Usually this focuses on graduates or specific training courses, but can include key research activities on occasion.

4.4 Vocational Education, Training and TEC/LEC Relations

The involvement of universities in vocational education and training is set to expand rapidly in the coming years. The continuing difficulty of some employees to fill vacancies successfully and high levels of student, graduate and other unemployment, graphically illustrate the scale of "the skills mismatch".

Pressure is being put on universities from a number of quarters to give more emphasis to vocational education – from parents, from students themselves, from employers

seeking to enhance vocational skills in particular fields (eg, nursing) and from the adoption of national vocational standards.

In addition, the Government view has been that universities "should pay particular attention to the needs of employers and of the economy as, for example, reflected in the National Education and Training Targets for Lifetime Learning...and should...work closely with Training and Enterprise Councils in contributing locally towards the achievement of these national targets"[17].

Training tomorrow's personnel

Local links with TECs, LECs, FE colleges and schools as well as, increasingly, local employers through more work-based learning are of growing importance to universities, particularly those that are less research oriented. The current forms and future directions of this involvement can be summarised in the following broad categories:

- Undergraduate Vocational Degrees: including sandwich courses with placement years and vocationally oriented subjects as well as incorporating the Enterprise in Higher Education initiative including communications skills and increasing opportunities for part-time degrees with modularisation

- Postgraduate Vocational Degrees: close links to secondment from industry, and professionally recognised qualifications such as for the

Royal Town Planning Institute, Masters of Business Administration, and postgraduate medical qualifications

- Post-experience Continuing Vocational Education Diplomas and Certificates for the existing workforce: including short or longer courses for management, IT, social work and health and safety education

- Validation of Degree, Diploma and Certificate Qualifications: including links with NVQs, links with GNVQs through FE colleges and City and Guilds

- Accreditation of Local Institutions: including recognising local vocational educational centres and courses

- Distance Learning: including degree, diploma and certificate education building upon the success of the Open University

- Short Courses and Training: non-accredited training especially in conjunction with TECs to fill local labour market needs of local firms and labour force, including IT, managerial and health and safety training

- Securing New Areas of Vocational Education: including seeking roles in nursing education relating to the Nursing 2000 programme

- Developing the university's non-academic staff: including *Investors in People* (Employment Department scheme for accreditation for non-academic staff) as well as contributing to local and national training targets.

Despite the fact that continuing vocational education has quadrupled in the past decade it nevertheless remains a "developing base" for university activity. Growth should continue as market reforms increasingly redefine the role of universities as training providers, perhaps

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17 Patten, (1993)

placing them in competition with local organisations, both public and private sector: alternatively if universities adopt more specialised forms of education and training they may find themselves a provider at the national scale due to the inability to fill places at the local scale.

Arguably the concentration of vocational provision amongst only a few universities is a result of this trend. This pattern appears to be reinforced by the emergence of new sectors of vocational education, most recently nursing, with mergers and joint ventures between universities and local institutions further concentrating vocational education and training provision at the local scale. Such concentration may bring benefits if the opportunities to raise quality are not lost in drives for economy and efficiency.

An increasingly important element of universities' roles in vocational education and training is their relations with the newly formed Training and Enterprise Councils (TECs) in the UK and Local Enterprise Companies (LECs) in Scotland. TEC/LECs' brief has lead them to work in partnership with the local educational system to provide relevant, coherent and high quality training and education opportunities as well as increase employer involvement. Universities, couched in the current market reforms, therefore occupy both the realms of TEC/LEC activity with the university as both a provider and employer.

TEC/LECs' relations and involvement with universities have included the following:

- Joint Development of Local Labour Market training needs analysis

- Sponsorship of short courses: including management, IT and languages

- Business Information Resources: including European documentation centres

- Joint Bids for training courses

- Assessing university training needs and "Investors in People" promotion

Figure 4.7: Attractions Most Enjoyed by Staying Visitors
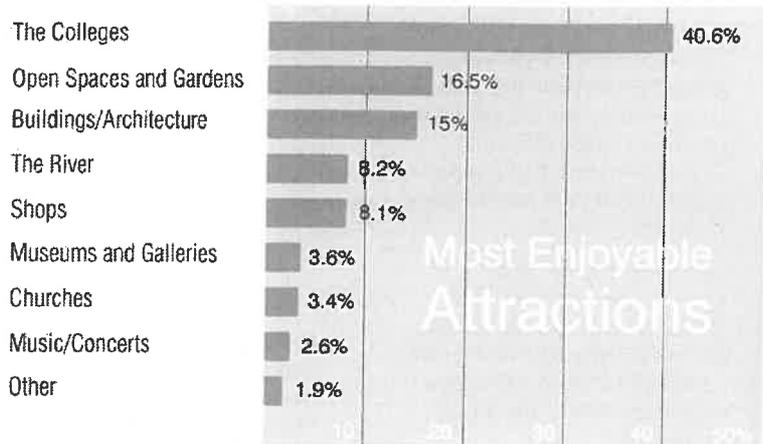
Source: Cambridge City Council, (1993)

Figure 4.8: The Growth of Tourism 1979–1991
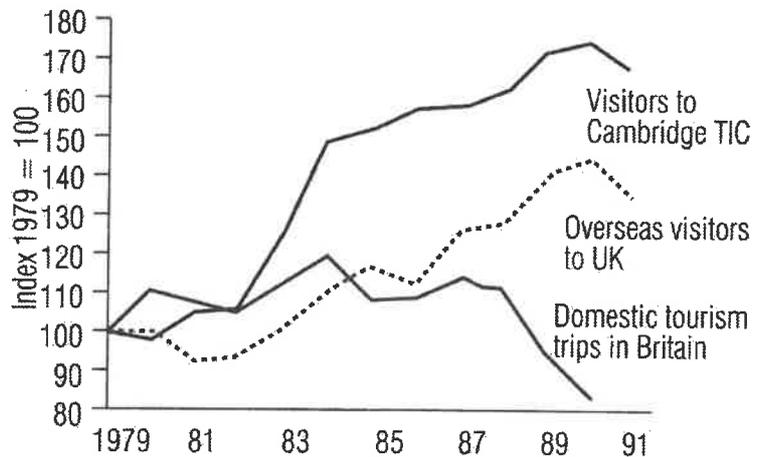
Source: Cambridge City Council, (1993)

- Collaborative work to create "One Stop Shops"

- Work to attract inward investors.

However, while most TEC/LECs have taken a constructive approach toward links with universities progress has been slow at least partly as a result of the limited financial leverage which TECs can offer to a highly capitalised higher education sector. For the vast majority of universities TECs and LECs account for only a small proportion total income, typically less than 1% in absolute terms.

However, our survey revealed that several universities last year gained over 3% of their income from TEC/LECs. All of these universities defined their relevant local area as the sub-region or

region, suggesting the importance of a "match" between TEC/LECs labour market areas and those which universities prioritise.

New universities also have a greater propensity to gain significant funds from TEC/LECs in relation to total income suggesting that this source has been perceived as more important by ex-polytechnics as they aim to expand both the scale and scope of their vocational education and training in competition with older universities.

Also significant from the survey analysis is the degree to which TEC/LECs are represented on university boards. Over two thirds of respondent HEIs had no TEC/LEC representation. However, where TEC/LECs did have representation this was

usually through individuals. Significantly, individual representation tends to coincide with higher relative proportions of TEC/LEC income. It is also worth noting, that Scottish LECs are more integrated and powerful economic development agencies than their counterparts elsewhere in the UK.

University relations with TEC/LECs were formed since 1991 and many are still feeling their way. Their relationship with universities is likely to become more important in the future because of:

- Universities' pivotal role in the local educational system bringing employers and the education system together

- Universities' increased involvement in vocational education, particularly as a provider, which dovetails with the TEC/LEC strategic motivations

- Universities' strategic input to local labour market strategies through local research

- Universities themselves as a customer of locally provided training services.

4.5 Contribution to the Tourism Industry

The tourist industry in the UK is a significant economic sector, earning substantial foreign revenue, and supporting up to 1.4 million jobs[18]. Tourism in the UK generally is driven by visitor attractions, and universities throughout the UK have buildings and campuses of high architectural quality and host a significant number of museums and art galleries. Most of these are minor attractions adding to the length of stay and total tourist spend rather than being the prime reason for the visit.

The main exceptions to this are Oxford and Cambridge Universities. The colleges and museums of Cambridge University serve as major tourist attractions in their own right together providing the great majority of the city's attractions

(Figure 4.7, 4.8). Tourists spend an estimated £180 million per annum and sustain in the order of 5000 jobs[19]. The university colleges and museums in Oxford are believed to provide a comparable scale of impact.

These two universities are increasingly concerned with the "disbenefits" tourism brings: eg, tourists invading quadrangles, teaching and dining rooms, litter,

traffic congestion and car parking difficulties. Cambridge University has a representative on the city's "Tourism 2000" Committee which includes council and tourist board representatives and which is attempting to resolve these problems.

Away from Oxbridge, there are few visitor attractions of international status; although in towns such as Durham or St Andrews, the university adds to a general historic ambience which is sold, for example, to US tourists. Nationally there are some key museums and art collections on university campuses, such as the Museum of Rural Life in Reading, or Glasgow University's Hunterian Museum with its Charles Rennie Mackintosh exhibits. Yet for most of these the direct effect on tourist destinations is limited to the specialist rather than the mass market.

More significantly a growing number of universities have actively marketed themselves as vacation conference venues. Overall, educational establishments (including universities) have a 6.4% share of the conference market in terms of delegate days in the price-sensitive "association" conference market, particularly for events of more than 75 delegates. Around 30 universities run year-round management training centres which together represent 15% of the UK's independent management training centres. Universities, however, have yet to achieve a significant stake in the lucrative and less price-sensitive corporate sector.

Typically universities are able to offer, at low cost, large halls and

numerous lecture theatres, accommodation, technical equipment, sports facilities and a learning atmosphere. The marketing and promotion of these facilities is co-ordinated by the British Universities Accommodation Consortium to which 60 "old" universities belong. In total, BUAC members offer 73,000 beds for conference delegates with a potential of over 9 million bed-nights over the 18 vacation weeks in locations throughout the UK. The former polytechnics and other HEIs use the Higher Education Accommodation Consortium.

The estimated income from conference business in the "old" universities was £75m in 1990/91, and turnover is growing. Since so many are already gaining revenue from the conference market it is perhaps not surprising that a recent survey of 32 "old" universities shows that of the 15,000 or so new student residence rooms they were constructing at the time to facilitate expansion, 46% will have *en suite* facilities.

The UK conference market is however experiencing increasing supply of facilities chasing fewer and shorter meetings. Universities may suffer in such a competitive environment owing to their typical lack of top standard hotel amenities having catering which is usually cafeteria-style and campuses which may be large or on split sites.

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18 Department of of Employment estimates 1.4 million jobs in tourist related industries, although this includes restaurants, bars, sports, etc where not all users are necessarily tourists.

19 Tourism 2000, Cambridge City Council, 1993
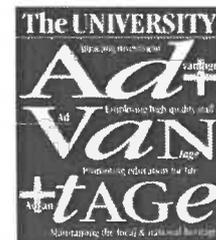
5 Universities and the Built Environment

5.0 Introduction

The vast majority of universities in the UK are situated in urban areas with most owning a substantial stock of buildings and, proportionally, even larger land holdings. In the consolidation and expansion of their activities many have assembled very substantial areas of land upon which their main campus is located. Some have even acquired further substantial land holdings as a result of endowments, most notably Oxford and Cambridge.

Universities are far from static in their use of urban space. The growth and decline of different departments and technical changes in ownership, especially in the case of the former polytechnics, have instigated a continuous process of adjustment to the stock of land and buildings, even during periods of severe capital resource constraint. Recent expansion of student numbers has also necessitated increased levels of university capital investment in new buildings, particularly in student accommodation.

This chapter outlines the importance of universities to the quality of the built environment of cities and attempts to identify some of the key pressures and constraints felt by universities in relation to their development of land and buildings. Some examples of "good practice", in relation to "inner city regeneration" and opportunities for effective collaboration with other partners, to secure both the scale and design of new developments mutually acceptable to the needs of the university and community, are also highlighted.

More than a chateau of its former self – 13th century Dudhope Castle now houses Dundee Institute of Technology's Business School

5.1 The Quality of the Built Environment

University Buildings

The Toyne Report (1993) found university real estate to be "generally well maintained"[20]. University buildings, in general, tend to add to rather than detract from the quality of the built environment. For example, our survey analysis reveals that more than 75% of respondent institutions have listed buildings. Significantly, the figures for old and new universities with at least 10% of their floorspace listed are very similar – 36% of old universities in contrast to 32% of the new universities. Examples of proportions of listed floor space amongst HEIs include: Humberside (10%), Huddersfield (13%), Leeds (24%), Cardiff (19%), Oxford (23%) and Glasgow (45%). Cambridge did not give a specific figure – although clearly it is high. This substantial stock of listed buildings and other buildings of architectural merit owned by the universities have undoubted value in terms of local amenity and often contribute to place-marketing efforts by local economic development agencies.

Recent university expansion has led to the further acquisition and refurbishment of listed buildings. Notable examples include: the University of Central England in Birmingham's new £3.5m school of jewellery, which involved reorganising two listed buildings into a new layout; the University of Huddersfield's conversion of a listed stone mill complex into a new School of Computing and Mathematics; and Dundee Institute of Technology Business School's recent occupation of the thirteenth century Dudhope Castle which is owned and newly refurbished by the city council[21]. However, in direct financial terms, listed buildings are often a financial liability for the universities concerned as repair and upkeep are very costly. In addition, they also tend to be highly space and heat-inefficient. Our survey found that a third of respondents with listed buildings have discussed listed-building

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20 Toyne, (1993)
21 Rattenberry, (1992), pp. 12–13

repair with their respective local authority over the past 12 months.

The central location of many universities brings them into close proximity with public spaces and as such university architecture contributes to both the style and structure of the built urban form. In the immediate post-war period, new university buildings assumed a leading position in terms of architectural style in Britain. As early as the 1960s, however, this position began to wane. Although universities had their share of less aesthetically meritable building in the post-war period this was also true of other buildings[22].

Notwithstanding the historically favourable position, many commentators have expressed the view that, generally, the future for university architecture looks bleak. For example, *Building Journal* recently lamented that future development is "a case of expansion on the cheap"[23]. These claims arise partly in response to government policy which has shifted the construction of halls of residence into the private sector, consequently

differentiating client universities by their ability to pay contractors, and allegedly leading to "design-and-build schemes marked only by their mediocrity" with design being "something reserved strictly for Oxbridge"[24]. However, planning mechanisms clearly have some purchase upon architectural designs; for example, in Huddersfield the council has recently stipulated that new student accommodation buildings be faced in natural stone in order to blend with surrounding land uses.

Constraints created by increasingly tight central funding controls do not necessarily preclude interesting and appealing design in university buildings as Sir Norman Foster's recent work at Cranfield illustrates[25]. This project was constructed on a limited budget yet obtained a shortlisting for a major Royal Institute of British Architects (RIBA) award. Foster has also been commissioned for work in the rebuilding of Imperial College, London, which will allegedly

remove some of the 1960s "carbuncles" from Kensington[26].

Higher profile student-accommodation schemes are also increasingly being constructed with a view to universities' entries into the summer course and conference market. In addition, greater care is also being taken both to ensure and facilitate the blending of student housing schemes with their surroundings as part of university–local authority collaborative initiatives[27].

Amenity Spaces

The vast majority of HEIs have grounds that are accessible to the public. Our survey analysis, for example, revealed that 59% of universities have grounds free to public access whilst a further 19% offered limited access. However, pressures relating to

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22 *Architectural Review*, 1970, p. 242; Chablo, (1987)
23 22nd October 1993, p. 5
24 *Building Journal*, 22nd October 1993, p.5
25 *Architects Journal*, 25th November 1992, p. 30–2
26 Dyke, 16th January1993, p. 92
27 *Building*, 22nd October 1993, p. 37

A new seat of learning: De Montfort University's campus in Milton Keynes

financial constraints upon the maintenance of amenity spaces perhaps indicates future change in relation to public access.

Other pressures are also apparent, for example in relation to botanical gardens, where the disciplinary shift in natural sciences away from botany and zoology toward physiology and biochemistry has created a crisis of current relevance and raised the question as to who should assume financial responsibility. Several have moved either partly or wholly into local authority ownership, for example Glasgow and St Andrews. Others have managed to secure voluntary support and/or donations, much of it from "Friends of the Botanical Garden" organisations, for example at Bristol and Bangor.

Traffic and Parking

Universities generate a substantial amount of traffic and car parking difficulties, often in tightly confined areas. Some measure of the problem is illustrated by the University of Newcastle, for example, which issues some 2,300 car parking permits but only provides 916 car parking spaces. Although significant generators of traffic, universities have been described as relatively "traffic-friendly" with staggered arrivals and departures of staff and students[28].

However, the problem has been recognised in initiatives to reduce traffic congestion. These include the University of the West of England which operates its campus space for Bristol's shoppers to "park and ride" at weekends and Newcastle University which makes its city centre car park available to the general public at the weekends and evenings for a fee. Universities' actual and potential contribution to the built environment can therefore have both positive and negative effects, a situation with close parallels to universities, relations with urban regeneration.

5.2 Property-led Urban Regeneration

HE's recent expansion is expected to continue to generate significant demand from universities for more accommodation, particularly for students, and thus provide a major opportunity for those involved in urban regeneration. Indeed, a 1991 survey of 28 universities and former polytechnics found that 58% planned to acquire existing buildings whilst 65% expected to engage in refurbishment work to expand their floor-space. The same survey also found that 96% of HEIs planned construction for student halls[29]. A later survey, in 1993, of 32 "old" universities reveals there to be over 15,000 new student residential places currently under construction[30].

Patterns of university land ownership are commonly concentrated, adjacent to campuses and, in only a few cases, extending to outlying country estates. As a consequence, often the cheapest options for the university are to cram developments on their existing campuses, avoiding the costs of additional sites, or if this is not feasible, to expand on outlying sites if available.

Current examples of "campus cramming" include Liverpool John Moores University's recent infill developments on the Mount Pleasant site. Examples of the development of rural satellite campuses are to be found, such as Wolverhampton University's planned £9m new campus in the grounds of a listed building and the University of Northumbria's development at Longhirst Hall, Morpeth.

Historically, the development of large scale university schemes within inner city areas has been inhibited by ownership constraints, relatively high property costs relative to development value and difficulties with land and property assembly[31]. These factors, in combination with the "Oxbridge ideal" of universities as secluded communities of

scholars located in pleasant environments, shaped the siting of universities during the various phases of expansion during the 1950s and 1960s in physically discrete campuses away from the large industrial cities.

However, as problems of urban decline and the disuse of city lands became apparent, this centrally directed expansion could perhaps be viewed as a missed opportunity in terms of urban regeneration. For instance, Lancaster University received criticism for not locating in disused warehouses which would have made a more effective utilisation of urban land. In addition, the university buildings that resulted were often compact and thus amenable to accommodation on central city sites[32].

Government policy turned toward urban regeneration during the 1980s as the deindustrialisation of cities in the UK proceeded apace leading to the creation of extensive tracts of derelict land. Drawing on American experience, government priority shifted toward returning land back into productive use, particularly that which had development potential.

New local institutions and funding mechanisms, including Urban Development Corporations and property grant schemes, were established to "pump-prime" private sector development of new industrial, commercial and residential property. Deregulation of financial services in the UK in the 1980s combined with credit liberalisation led to a property market boom. Although much of the machinery to support inner city development was not set up until the mid-1980s, substantial levels of new development were achieved. For example, several million square feet of development was completed or under construction by the end of the 1990s within UDC areas alone.

28 Dyke, (1993), p. 93

29 Architects Journal, 23rd October 1991

30 Paine, (1993), p. 73

31 Casson, (1965), p. 454; Abercrombie, (1974)

32 Abercrombie, (1974); OECD, (1982), p. 24

However, as the recession developed in the early 1990s the property market boom collapsed, creating a legacy of floor-space overcapacity. In consequence, government agencies, particularly the UDCs, have struggled to maintain the momentum they built up in the late 80s in terms of rates of new development, without at the same time stockpiling vacant floor-space. The continued expansion of universities has presented just such an opportunity for UDCs and other urban regeneration agencies to achieve their physical regeneration objectives.

Collaboration with local regeneration agencies can provide highly cost-effective solutions to the accommodation requirement of universities and also contribute significantly to efforts to secure urban regeneration. Table 5.1 illustrates some of the more notable examples which have realised these two aims simultaneously.

These examples clearly illustrate that there is considerable scope for an effective partnership between both universities and regeneration agencies to seek ways whereby cost-effective solutions can be found to realise university and regeneration needs simultaneously. Urban regeneration also has the advantage of easing development

pressures on the green-belt land surrounding UK cities.

Whilst university expansion into new sites has created opportunities for urban regeneration, development on their own land has also been evident as a cost-effective solution to expansion. The development of campuses within the urban area can have the effect of reducing the quality of the townscape by taking away valuable amenity areas and also limiting future development flexibility.

Ideally, student accommodation should be located close to the centre of urban areas and within easy reach of the university; and teaching and research in most cases is most conveniently located on or close to the main campus. A balance must be struck which optimises the benefits of both preserving amenity and affording convenient access for staff and students to other university facilities, such as libraries and common rooms, and to the facilities of the urban centre.

Imaginative partnership between central and local government, the private sector and universities could achieve the re-use of redundant land and buildings even in areas where grant support for new development is available. One good example of this is the

conversion of a "hard to let" tower block in the inner city area of Cruddas Park, Newcastle, to student accommodation undertaken in conjunction with Newcastle City Council. Rather than direct financial transfers being made, universities together with local partners may be encouraged to undertake such schemes if permission to develop other uses, which could generate sufficient income or capital receipts elsewhere on university-owned land, were granted. The result would be the same overall amount of development but directed toward more suitable locations.

5.3 Effects on the Private Rented Housing Market

The forecast increases in student numbers mentioned earlier means that, even with an increasing proportion likely to live at home, universities keen to attract students from other regions will still need to increase their student accommodation considerably. Even if they achieve this, student preferences for a variety of accommodation still look set to increase[33]. In this way, students can serve as a boost to flagging private rented housing. For example, at Lancaster 3000 students who live off-campus support the local rented sector particularly in the vicinity of Morecambe Bay[34]. Similarly, holiday resorts such as Brighton and Bournemouth benefit from low-season student demand for their boarding houses[35].

However, by stimulating demand, there are also instances where universities can make it difficult for the indigenous population to secure such accommodation in a sector which is shrinking dramatically in both absolute and relative terms. In Durham, for example, expansion has meant that students now have to spend at least one year living out. This has exerted enormous inflationary pressure on the local

Table 5.1: Some Examples of Recent University Expansions on Inner-urban Sites

Coventry University planning permission for a 600-bed student village on the site of a former factory. The university has also just bought another former factory for conversion to various uses.

University of Humberside purchase of a former warehouse on the city's reclaimed dockside which will be converted into a library.

London Docklands Development Corporation proposal for a new university be set up in the Royal Docks.

Sheffield University partnership with central and local government and the private sector to develop a university in the nearby industrially depressed Dearne Valley.

Sunderland University building on a 24 acre site reclaimed by the local Urban Development Corporation on the banks of the River Wear.

Teesside Development Corporation new University College on a former derelict site, a joint venture between Durham and Teesside Universities. Phase I cost approximately £8.5m.

Source: CURDS Survey (1993)

33 Brown, (1992), p. 100
34 Martin, (1992), p. 28
35 Smith, (1986), p. 52

housing market in a city which is surrounded by economic problems[36]. However, at a national level, it should be noted that there is "scant research to back up such claims"[37].

Students' private rented accommodation can also be an environmental "disbenefit", irrespective of its effect upon stimulating demand in local rental markets. This is due to its propensity to suffer from untended gardens, peeling paintwork, etc. as absentee landlords keep maintenance to a minimum, encouraged by the fact that student tenants, due to the finite length of their stay, will often put up with conditions that longer term residents would not tolerate. Further problems can also occur from limited maintenance and fire and safety provision. For instance, a 1992 survey in Nottingham looked at 277 properties in the private rented sector of which 221 were occupied exclusively by students and found that not one shared house met fire safety regulations[38].

5.4 Universities and Land Use Planning

The current programmes of universities both to expand and make better use of their estates in order to meet projected growth in student numbers, are in many cases meeting opposition from their local planning authority. By far the most frequent sources of conflict cited by universities in response to our questionnaire were planning-related.

Of those that further specified the nature of the conflict, planning permission for student accommodation and car-parking restrictions were overwhelmingly the most commonly cited. A report by Stroud (1994) commissioned by the CVCP has found that only 10 out of 86 institutions had experienced no planning-related problems; and over half cited problems relating to four or more different kinds of planning problems (See Table 5.2).

Until recently universities had experienced a relatively long period of consolidation and adaptation of their building stock rather than a significant expansion

of it. In the zoning of land use it is therefore not surprising that some local planning authorities have viewed university activities in a relatively static sense having witnessed relatively few applications for major new building projects over the previous decade. The result appears to have been that some universities are now being faced with overly restrictive land-use policies.

There is anecdotal evidence that excessive demands have delayed developments and may even have led to schemes being developed or planned elsewhere and in locations which are less appropriate in terms of both public and university interests. Whilst there is current conflict it "cannot be said that university estate strategies, in general, risk being frustrated by planning policies"[39].

The Stroud report will also argue that local planning authorities need to be aware of "the significance of universities for both national and local economic

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36 Sanders, (1992); Smith, (1986), p. 51
37 Brown, (1992), p. 100
38 Bell, (1992)
39 Stroud Report, (1993)

A building site for sore eyes

Not so dry. The botanical gardens of the University of Wales, Bangor, are open to the public

Table 5.2: Universities and Local Planning Problems

Problem	No of Times Cited	% of Institutions
Development plans	43	57
Car parking	40	53
Conservation/Historic Buildings	38	50
Residential Accommodation	37	49
Conditions on Planning permissions	33	43
Section 106 or 50 agreements*	33	43
Green Belt	29	38
Use Classes Order	23	30
No consultation on development plan	23	30
Provision for the disabled	20	26
Environmental assessment	16	21
Other	14	18

Note: Figures exclude the London Schools and Senate Institutions whose circumstances are distinctive.

* Section 106 under legislation for England and Wales and Section 50 under legislation for Scotland.

Source: Stroud (1994)

growth" and take into account "their development needs – especially for student accommodation". Many local planning authorities, however, are willing to take advantage of the fact that universities are relatively fixed in their current locations and, unlike a private developer, cannot "walk away" from demanding planning conditions or restrictions; "planning gains" can therefore undoubtedly be won from the university by the local planning authority.

Although there is a growing number of new university schemes contributing to the regeneration of Britain's cities and adding to the quality of the built environment, there is clearly widespread failure on both sides to realise that these schemes may be in conflict over detail as a result of a lack of sufficient negotiation/consultation or flexibility rather than any fundamental divergence in strategic objectives.

Our research suggests that in many cases universities and local planning authorities have broadly similar objectives: to maximise the quality of the built environment; to contain the physical expansion of the university (but, at the same time, avoid either site cramming or limiting the long-term standing and success of the university) and to secure new developments on sites which will be attractive to staff/students, and which are not in conflict with the aspirations of local residents.

Potentially much could be achieved by universities, simply by gaining greater recognition from the local planning authority of their economic and other social, environmental and cultural significance to the local community. At the same time planning authorities need to articulate in more positive terms what they are trying to achieve (rather than what they are seeking to prevent) so that universities have the opportunity to adjust their plans wherever that is possible.

Through greater consultation (eg, by exploring with the local planning authority the nature and extent of shortages in accommodation supply, the relative merits and economics of development on alternative sites, alternative designs and their financial implications), the source of many current conflicts could be reduced if not completely eliminated.
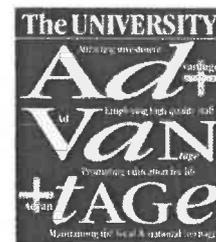
6 Social and Community Development

6.0 Introduction

Universities contribute to the development of the social life of their local communities through the provision of non-vocational education to the local population; by providing access to their facilities to the public; by contribution to their local cultural industries and by the voluntary work of students. This chapter outlines this contribution in greater detail.

6.1 Community Education and Local Recruitment

Local recruitment is likely to become increasingly important for universities as the changes in student funding raise the prospect of more "stay at home" students. However, policies toward local recruitment vary between regions and institutions. A difference exists between new and old universities, where 79% of the former and only 64% of the latter have such a policy.

According to responses to our questionnaire actual local intake varies across the UK; with half of all universities having a local intake of less than 20% and the remainder ranging up to 80%. The region that is most locally oriented is Scotland, with 75% of respondents estimating that over 40% of their students came from the locality and the remainder estimating the level of local intake at over 40%. Indeed, 70% of Strathclyde University students are from that region. Conversely, 63% of institutions in the Midlands had less than 20% local intake.

6.2 Access and Broadening Intake

"Access" essentially consists of the processes that facilitate and include the admission (to undergraduate courses) of students aged 21 or over at the time of entry and applicants with non-traditional or no formal qualifications. Access entrants include those holding various diplomas, those having done local access courses, Open University credits, foundation courses and guaranteed-place access courses or who can show other recent evidence of their capacity and interest in academic study (such as attendance at university adult education).

Access has been central to those universities which have made a commitment to provide educational resources for their communities. Our perspective on this commitment is to view it in terms of broadening intake for the victims of social exclusion.

Intake rates via the access route vary by type of university. Our survey revealed that just over three quarters of old universities admitted less than 20% of their students via the access route. New universities revealed a more active use of access with only 42% admitting less than 20%. For Oxford and Cambridge the proportion was less than 10%. While there was little regional variation in intake via access, with most regions fitting into the 10–19.9% range, the picture at individual institutions varied dramatically. For example, 60% of the intake at Middlesex University is via access while at Imperial College London the proportion is less than 10%.

Some commentators have attempted to explain the reasons for these variations. Fulton and Elwood found that, whilst many old universities wished to make space for non-traditionally qualified students, they were not making enough active efforts to recruit them[40]. Similarly, Brown and Bimrose's work on "old" and "new" universities found that "most admissions tutors continue to focus upon narrowly defined academic achievement"[41]. Generally though, the picture in the new universities is characterised by wider use of access as an intake route.

Amongst the examples of innovative practice are Bradford and Salford Universities. The former operates an Access Unit whose work includes workshops and advice on appropriate study and interview techniques for those interested in future study at the university or elsewhere. In the 1980s Salford University pioneered the so-called "2 + 2" degree courses in collaboration with a number of local colleges of technology or higher education. The first two years are spent at the college for an

HND followed, for those students who reach the required standard, by a further two years at the university on an honours degree course. Minimum entrance requirements are one A-level pass in a science or engineering subject, with students also required to have studied at least two A-level subjects.

Many universities also help people who may be tied to a particular town or job through offering part-time degree courses and validating degrees at other institutions within the region. Sunderland University, for example, has 500 studying on such franchised courses. Indeed, general university – further education links are widespread. Our questionnaire revealed that 86% of universities (85% "old", 96% "new") have links with such institutions whilst 23% have links with other "gateway" institutions (29% "new" and 21% "old").

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40 Fulton & Edmund, (1989)
41 Brown & Bimrose, (1993), p. 154

Several universities in inner-city areas have encouraged students who come from local schools to return to educate and encourage others to follow their example. Similarly, with this same aim, Liverpool's three HEIs, together with Granby/Toxteth Task Force and Liverpool Education Authority appointed an individual several years ago to link schools and the local HEIs (with access a possibility for those without traditional qualifications). The University of the West of England has also been involved in close collaboration with local schools and FE colleges.

6.3 Non-Vocational Continuing Education

In the United Kingdom in 1990–1, (the most recent figures available – including only the "old" universities) there were 28,618 continuing education courses, 620,909 enrolments and 15,183,755 student hours. More than half of these courses and enrolments were in Liberal Adult Education (LAE). Such courses have not enjoyed the growth rate experienced by continuing vocational education between 1970/1 and 1990/1, although in this same period the provision of LAE (enrolments) increased by 77% and the number of courses doubled[42].

LAE courses are mostly non credit-bearing and almost none has vocational application. They include evening classes and some day courses and are predominantly concerned with arts, language and area studies. The five largest providers, in terms of courses and student hours are Birmingham, Leeds, Nottingham, Ulster and London. These contrast starkly with the London Business School and Heriot-Watt which offer no courses or limited provision, although admittedly such low levels are very much the exception[43]. To set continuing education in some perspective, enrolments in such courses often exceed actual undergraduate and postgraduate numbers combined

at several institutions (even allowing for those who do more than one course).

The "new" universities are said to have been very much more oriented to continuing vocational education than to other continuing provision. However, with the fusion of PCFC and UFC, all award-bearing continuing education (vocational or otherwise) will be incorporated under one block grant after 1995–96. The remainder will be bid for by both "old" and "new" universities – the latter having previously had no central funding for non award-bearing continuing education.

Thus, "old" universities which also had less HEFC assistance in the past may make some gains in future funding rounds at the expense of other providers. At present, universities are waiting to see which courses will be recognised by the HEFCE as award-bearing. Significantly, in the context of the concerns of this report, the HEFCE claim they will try to ensure a reasonably even geographical allocation for non award-bearing provision.

6.4 Public Lectures and Other Communications

Our survey found that 78% of universities hold free public lectures which often attract distinguished guest speakers. A further 17% either charge for entry or allow public entry on certain occasions. Several universities provide these lectures in collaboration with other local bodies such as at Coventry and Exeter Universities where some are held jointly with their respective cathedrals. Indeed, at Exeter the public may even sit in on undergraduate lectures and student debates for a nominal charge. Similarly, Essex also works with its local authority in mounting town–gown lectures.

A less direct way in which university knowledge is available to the public is through the extensive use of university expertise by the local media who

are often supplied with lists of university experts and their field of knowledge. At Sussex University, for example, members of the university regularly appeared in the 1980s on a weekly BBC Radio Sussex programme to describe their work[44]. Finally, it is worth noting that staff and student custom often makes the provision of specialist and academic bookshops economically viable in many towns.

6.5 Contribution to Local Sporting Facilities

There is a dearth of information on public use of university sports facilities. The database at the Sports Council's National Information Centre provides only five references, none of which is national in scope and the three that were dated were from the 1970s. Our research found that the types of facilities are very varied, ranging from general facilities such as squash courts, sports halls, turf pitches, swimming pools, multigyms, tennis courts and athletics tracks to more specialist facilities such as climbing-walls, sports injuries clinics, synthetic pitches, floodlit "astroturf" pitches, water sports facilities and sports fitness research centres.

Universities typically allow some public access in order to recoup some of the costs of provision and upkeep. Older universities appear to offer more provision than the new universities with 82% of the former having facilities open to the paying public compared with 54% of the latter. Such accessibility tends however to receive little promotion and to be relatively limited so as not to conflict with student and staff needs.

Several universities provide facilities jointly with other bodies as at Lampeter where the university provides squash courts (to which the public have access) jointly with the local authority.

42 UCACE. (1992)
43 UCACE. (1992)
44 Smith, (1986)

On track for sporting success

Keele, Glasgow and Anglia Polytechnic University are also amongst those who run some or all of their sports facilities with the local authority. The University of the West of England shares its sports facilities with a local high school.

Where universities do not have their own facilities they may still help, and be helped by, their local community such as at Portsmouth where university students are allowed a discount when using the nearby civic swimming pool. Indeed, the more flexible student timetable often dovetails neatly with slack periods in public demand (when many are at work).

6.6 Public Access to University Libraries and Other Facilities

Many university libraries have provided free services to various sections of the community. Our survey found that 90% of universities offer some degree of main-library access (a mere 26% for departmental libraries). However, they have not always been overly keen to publicise this

A public occasion. Archbishop Desmond Tutu drew a crowd of 1600 local people when he spoke recently at the University of Exeter

and have often sought to discourage those whose needs can be easily met elsewhere (their first duty being to students and staff).

The main information demands from the general public are for professional business and EC information which have traditionally been charged for, although the money accruing to universities has been minimal. The former polytechnics and Scottish universities are said traditionally to have seen a much greater role in this area than other universities; yet from our survey results it is not

possible to identify any real difference between institutions.

Other, much less common, university resources available to the public include Hertfordshire University's county-wide bus service; Westminster University's computer centre for those with disabilities; Warwick's language centre and Bournemouth's public restaurant and exhibition space. Indeed, our survey found that exhibition space is available at 88% of the "old" universities and 56% of the "new" ones.

Only 9% (6 institutions) monitored public usage of all their facilities whilst all eight Scottish respondents monitored some or all of their facilities. However, a further 59% monitored at least some. Clearly, it is important that universities know who is using their stock of facilities and when they are using it, in order to manage demand efficiently. It may be that more promotion to the public is required or that public access needs to be rescheduled to benefit both university and community users.

6.7 Contribution to Cultural Vitality

The range of university contributions to their local cultural scene is very diverse. Several act as hosts to arts festivals and have multi-arts centres whilst many more have theatres which stage student performances and touring groups or house town dramatic groups.

Indeed, numerous university theatres and arts centres have sprung up since the early 1960s with the attitude generally being that the public should be admitted, particularly where financial outlays need to be recouped. Several of the multi-arts centres in smaller towns have become important cultural centres in their regions and sub-regions whilst many university facilities in larger towns and cities play more of a supporting role.

Our survey found that 63% of universities have theatres (59% for concert halls) open to the paying

public. Of the remainder, almost all have no such facilities. Some variation is also evident in terms of institutional type with older universities being better endowed with cultural facilities.

For example, whilst only 18% of "old" universities have no theatre, this figure is 56% for the "new" universities. Similarly, 85% of the "old" universities have concert halls (for which they charge entry to the public) whilst 72% of the "new" universities lack such facilities. Both theatres and concert halls are very evenly distributed in regional terms with at least half of all regions' respondents offering public access to these (except the South West where 40% have theatres open to the public).

Student Union popular music and comedy concerts are not always open to the public although a 1993 survey of 62 entertainments managers found that 72% of universities had public entertainments licences (with many non-respondents known to have gained them since)[45]. Such concerts fill a niche between club and major venues and thus have proved to be an important developmental ground for major talents whilst also helping to satisfy the demand from youthful

audiences in search of new talent. Exeter University, for example, claims that its student entertainments programme is the "mainstay of Exeter youth nightlife". Most unions advertise these events in local towns; all of which helps keep performances economically viable and attracts better performers.

There are several examples of universities working in partnership with other bodies to support their local arts scene. This arrangement is often highly pragmatic as exemplified by Sussex University whose Gardner Arts Centre audiences were 66% non-university. To reflect this high public usage, in 1985 the university transferred ownership to an independent trust (on which the university, the town and county councils and South East Arts are all represented)[46]. Other examples of similar partnership arrangements include Ulster (Coleraine), Newcastle University, Oxford, Stirling, Southampton and De Montfort University.

University staff and students also provide a major share of local demand for cultural events. Indeed, many surveys have identified their crucial importance in contributing to

the viability of events and facilities. For example, a major survey of the Brighton area in the early 1980s found that Sussex University academic faculties were four times as likely actively to support a music, dramatic or cultural society compared to the local population at large. Finally, university concerts also have a long tradition of including local talent to strengthen the quality of performances (see Table 6.1).

6.8 University Museums and Art Galleries

Universities have also played an integral role in the rise of the British public museum with the earliest such museum, the Tradescant Collection, forming the basis of the Ashmolean Museum at Oxford[47]. Today, Cambridge University is the major provider of museums in Cambridgeshire although, like other museums such as Glasgow University's Hunterian, it is also receives some financial assistance from its local authority.

45 EMSU Staff Survey, (1993)
46 Smith, (1986)
47 Warhurst, (1986)

Caring in the community – Portsmouth University Student Action Group in action

In 1986, 76 university collections were deemed by the Museums and Galleries Commission (MGC) as being of undoubted national distinction whilst, in all, there are believed to be around 300 university collections (including those smaller collections at departmental level). At least 54 are known to be open to the public, as these are on the MGC register[18].

Some university museums and art galleries receive "special factor" HEFCE funding owing to their high quality and include Bath's Holbourne Museum and Crafts Study Centre, the Hull University Art Collection, Kent's Centre for Study of Cartoons and Caricature, and Reading's Institute of Agricultural History and Museum of English Rural Life.

More generally, continued underfunding, coupled with the severe cuts of the 1980s, has had repercussions for the local and national museum community. Reduced opening and the inability to insure loans and exhibitions (as well as provide security for purchase, construction and repair funds) have been the resultant problems. Moreover, some of the huge university collections, particularly of natural history, have often ceased to be of use to university teaching. A consequent danger then arises that universities seek to sell some or all of these collections to private overseas purchasers.

6.9 University Community Service

We have noted in the opening to this report the growing importance of the voluntary sector in community development. Universities can and have become important components within this sector.

Examples of voluntary community work by the university, as opposed to students, include the efforts, between 1990 and 1993, of King's College London to address the problem of local homelessness. Elsewhere universities have established links with local bodies in relation to

Table 6.1: Selected Examples of University Contributions to Community Cultural Vitality

Arts Festivals: Queens (Belfast) hosts much of Ireland's largest arts festival, the University of Wales at Newton Powys hosts a Song and Welsh Arts Festival whilst Exeter and Brighton host several of their respective cities' Arts Festivals.

Theatres: Other examples than those already mentioned include Middlesex University, Leeds Metropolitan University, Brunel, Essex, Keele. Exeter and lastly Strathclyde Drama Centre. This latter, opened in 1992, is a former church converted in partnership with Glasgow Development Agency and others for university use and as a public venue for touring work.

Multi-Arts Centres: Warwick University boasts the nation's largest arts complex outside London with a quarter of a million visitors per annum whilst Nottingham University's new £5m Arts Centre has received an award from the city's Civic Society for its strong community emphasis. Other such centres include the Sussex Gardner Centre and Southampton's Nuffield Theatre.

Orchestral Performances: Aberdeen is particularly lucky to benefit from its university's frequent and high quality public performances as there is no other professional orchestra within three hours' travel. Manchester University has its own orchestra in addition to housing the Lindsay String Quartet whilst Staffordshire works with its local authority to stage public concerts

Popular Music: London University Student Union was recently voted one of the capital's best by *Time Out* magazine (before being closed down for admitting the public without having a licence to do so!). 1992 saw the Welsh National Eisteddfod using Aberystwyth Student Union for its nightly Welsh language rock performances. Finally, Manchester University even has a dance group open to the public – the "Rock 'n' Roll Appreciation Society".

Opera: In addition to the touring companies that visit the multi-arts centres several universities also have student groups such as University College (London) and Edinburgh's Savoy Opera Group.

Choral Performances: The choir of Kings College Cambridge is World-famous whilst other universities with choirs include Swansea University (which houses the city's Bach Choir), Newcastle and Aberdeen. Indeed, these latter two both draw part of their membership from the local public.

Cinemas: 20% of respondent universities have cinemas all of which are open to the paying public (30% of "old" universities have these, 12% of "new" ones have them although there are none at Oxbridge and the respondent London schools). Some of these are owned in partnership with local bodies such as Derby's Metro Arts Cinema which is also funded by East Midlands Arts, the local authority and the Teesside Film Theatre run by Teesside University in association with the Regional Film Archive, Northern Arts and Yorkshire TV. Some of the other universities with cinemas include Stirling, Swansea, York, Staffordshire, Kent, Portsmouth and Aston.

Other Cultural Contributions: Public organ performances are known to be given at South Bank University, Aberdeen, Oxford and Cambridge whilst comedy may be seen at numerous student unions and university theatres (the Cambridge Footlights Review in particular has served as a nursery for many of the nation's finest comic talents). Literature is also catered for at Surrey University which has an annual Book Festival which it runs with its local authority and Swansea, which has worked with the local authority to secure the town's designation as 1995 City of Literature. Finally, jazz, ballet, craft and textile exhibitions, photographic exhibitions and contemporary dance can all be seen at several of the multi-arts centres.

Source: CURDS (1994)

social issues such as at Warwick where the Social Care Practice Centre in the Science Park has close links to the Department of Applied Social Studies.

Glasgow Caledonian University has also engaged with the local authority in planning for social work provision. Salford is one further example of a university that has engaged in several collaborative research projects with local agencies. These

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48 Warhurst, (1992)

include work with Salford Family Health Services Authority to assess the health needs of the area's homeless and with the Cheshire Constabulary to assess the quality of police service.

Indeed, a number of other universities are engaged in research work with their local police forces including Durham's recent research on the taking of evidence at the scene of the crime and Newcastle University's Centre for Research on Crime and Policing and the Community, which works with Northumberland Police in the use of Geographical Information Systems to reveal crime patterns and in the evaluation of community policing initiatives.

University medical and dental schools also house specialist facilities and many of the best consultants and surgeons, thus benefiting local residents who require such services. However, in the past it has been alleged that concentration on specialism in universities has been to the detriment of general provision[49].

Finally, it should perhaps be noted that numerous university staff also make individual social contributions to their communities; eg, as school governors, councillors and lay preachers. Aberystwyth currently boasts justices of the peace, lifeboatmen and special constables among its staff.

6.10 Student–Community Links

The student body is a powerful and neglected force in the local community. At the present time there are 125 Student Community Action (SCA) groups in UK Further and Higher Education providing 15,000 volunteers who work with existing voluntary and statutory community organisations. SCADU (a body dedicated to the development of SCA activities; SCASDU in Scotland) estimates that the economic value of this voluntary activity is £9.6m. For example, Hull University is the city's largest voluntary organisation and Nottingham University has some 2000 SCA volunteers.

Some authorities claim that student volunteers are increasingly filling in for services no longer provided by public agencies. For example, at Warwick University the Student Community Action group runs a car service and increased demand from the elderly is expected following a recent decision to end the public "dial-a-ride" scheme.

Similarly, traditional "rag" fund-raising activities, which date back to 1865, make grants of approximately £2m a year to SCA projects, small local charities and larger national ones. Much of such funds is ploughed back into the community, usually in grants of £50 to £200, which often constitutes vital income for play schemes, community centres, etc.

However, the government recently announced proposals that future student union funding might exclude the work of SCA and "rag" groups and payment of sabbatical student-union officers concerned with such activities. However, at the time of going to press the Government's proposals have yet to reach the statute book and lobbying continues.

A possible future of student-community links is examined in the context of current developments within the US in Appendix IV. John Mohan argues that the American experience has illustrated the potential of utilising voluntary contributions from students to their local communities as part of a process of "service learning". This process provides students with transferable skills, such as problem-solving and negotiation, through involvement in community links as part of their curriculum.

Education for citizenship, combined with bringing the needs of community organisations closer to the core educational missions of universities themselves, have been identified as the driving factors.

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49 OECD, (1982)

The UNIVERSITY AdVantaGe

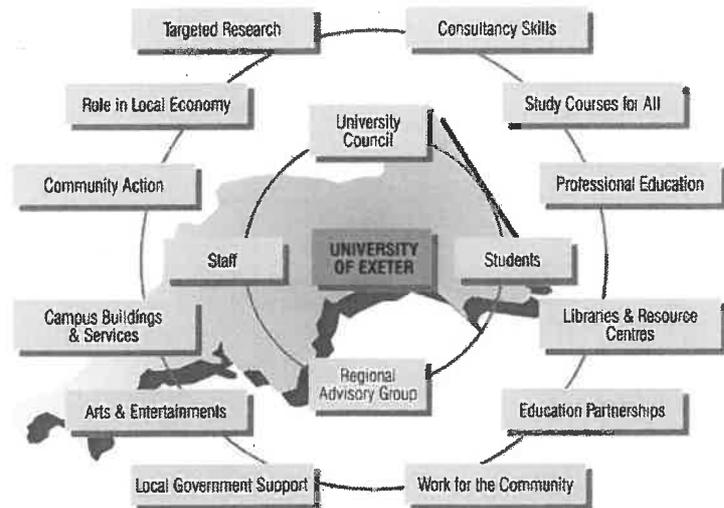# 7 Managing the University–Community Interface

7.0 Introduction

This chapter examines the ways in which universities manage the interface with their local communities. It draws chiefly upon the responses to our questionnaire addressed to vice-chancellors and principals, together with supplementary documents provided to us.

The analysis covers university strategies, the organisational structures put in place to implement these strategies, relationships with local authorities and other bodies, policy towards community use of university academic, sporting and cultural facilities, university inputs into local economic and community development initiatives and policies concerning student access and continuing professional development.

The analysis pays particular regard to the differences between "old" and "new" universities. The former polytechnics were essentially creatures of their local authorities and also have very different structures of governance; both considerations are likely to influence the nature of community links and the way these are managed.

Some attention is also paid to differences between communities at the urban and regional scales given that local and economic social circumstances are likely to impact on the nature of university/community relations. In this regard, an important distinction, to which more attention needs to be given, is that between England, Scotland, Wales and Northern Ireland, where the institutions of central and local government are markedly different.

Figure 7.1: Exeter University and Middlesex University Local Networks
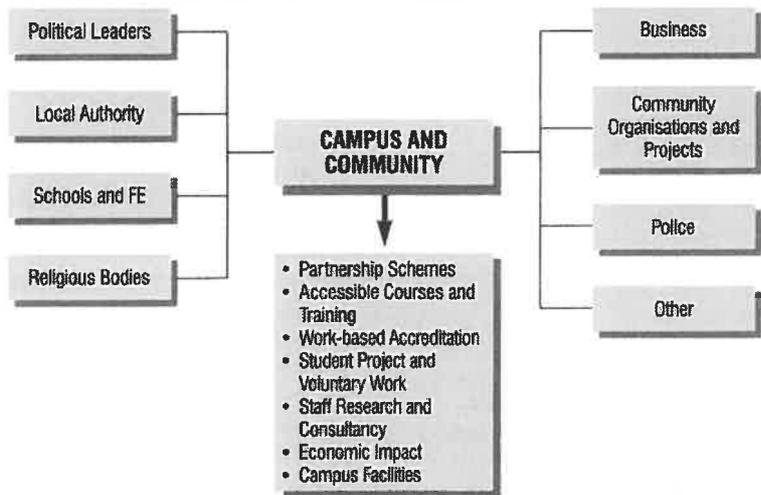
Source: Exeter University, (1993), Middlesex University, (1993)

7.1 Strategies Towards the Local Community

There is little doubt that relations with the local community are seen by universities to be important. Only four of the sixty five universities responding to the survey did not refer to their region in their plans. The locality is clearly of increasing relevance to both "old" and "new" universities, with 81% of all universities having seen an increase of involvement over recent years. However, the priority attached to this element in institutional plans does vary significantly – 74% of "new" universities regard links with the locality as a high priority compared with 47% of "old" universities.

Table 7.1: Local Orientation Strategies of Types of University

	"OLD" UNIVERSITIES % IDENTIFYING WITH STRATEGY	"NEW" UNIVERSITIES % IDENTIFYING WITH STRATEGY	ALL UNIVERSITIES % IDENTIFYING WITH STRATEGY
A community-based institution serving the needs of the local Area/Region	0	11.1	4.6
An institution seeking to contribute to the local area and also develop international strengths	18.4	74.1	41.5
An institution seeking to contribute equally between international research and support to local area	18.4	14.8	16.9
An international research institution seeking to provide support to the local community where it does not conflict with international research excellence	55.3	0	32.3
An international research institution with no particular ties to the local Area/Region	2.6	0	1.5

Source: CURDS (1993)

The majority of plans refer to "links with local industry" (the most frequently cited activity), "access to university facilities", "provision of services to the community" and "support for local institutions". In relation to each of these categories, the topic is more likely to be considered in the plans of "new" universities as compared to "old", indicating a greater depth of treatment and a higher priority attached to each topic.

For example, 32% of "old" universities mention "support for regional institutions" in their plan compared with 75% of "new" universities. In the case of the university's "contribution to the cultural life of the region", "old" universities score higher with 71% mentioning this topic in their plan, compared with 44% of "new" universities. Such differences reflect the more significant endowments of "old" universities with cultural facilities such as theatres, museums and art galleries, as well as contrasting institutional value systems.

The differences in definitions of the local community and in priorities referred to in Chapter 2 reflect how institutions perceive their own role. In the questionnaire, vice-chancellors were given a list of statements about the university strategy towards the local area/region and asked to select the one which most appropriately described their own institution (Table 7.1).

Not surprisingly there was a marked contrast between "old" and "new" universities in these perceptions. 55% of "old" universities regarded themselves as "international institutions seeking to provide local support". No "new" universities see themselves in such terms. 74% of "new" universities rather see themselves as "seeking to serve the local community and develop international strength". Significantly, 18% of "old" universities also see themselves in these terms.

Such contrasts clearly reflect the possibilities "old" universities have to provide a link for the local community into the global arena, with "new" universities striving to reach upwards and outwards. But whilst "old" universities have a potential for developing stronger local links, a higher proportion do not adopt a proactive strategy towards the locality.

Asked to rate their strategy towards the locality, 53% of "old" universities regarded it as "proactive" compared with 78% of new universities. Nevertheless, a significant number of "old" universities are now taking community involvement seriously. Arguably it will be easier for them to develop these local linkages than it will be for new universities to go global.

7.2 Structuring University/ Community Relations

From our examination of institutional plans it is clear that only a few universities have begun to structure their relationships with their communities in a systematic manner. Figure 7.1 provides two examples of attempts to provide a framework for community linkages, both for an "old" and "new" university.

Universities adopt a wide range of organisational structures and procedures for handling their interface with the local community. Again there are important differences between "old" and "new" universities reflecting different constitutions, inheritances and managerial style.

In general, "new" universities are more likely to have clear and well documented policy statements, officer responsibility at the centre and formal reporting procedures. In contrast, older universities are likely to have more diffuse responsibilities and to rely on informal mechanisms. Put another way, the structures adopted by "old" universities might be regarded as supporting a tactical engagement with the local community while

A new dawn for derelict land

those adopted by "new" universities reflect a more strategic approach.

The importance attached to community links and the fact that these spread across most of the functions of the university is reflected in the fact that prime responsibility is vested with the vice-chancellor or vice-chancellor supported by pro-vice-chancellor in 62% of universities. Given his/her other responsibilities and the great diversity of local interactions, the critical question is how vice-chancellors are supported by other officers and academic staff in meeting this responsibility for community linkage.

In "old" universities, supporting responsibilities may include a director of adult/continuing education, an industrial liaison officer, a public relations officer and a careers officer. If any officer has a lead role it is most likely to be public relations – in Southampton for example, the PR office is "the only office where a specific community relations policy has been designated".

"New" universities are more likely to create specific positions with designated responsibilities for drawing together links with the local community generally under the umbrella of a title such as "director of corporate affairs". But "old" universities are also experimenting with new structures and positions.

In Exeter University a Regional Advisory Group has been established, reporting to the Policy and Resources Committee. This group has its own budget for pump-priming regional initiatives. In Sheffield University a dedicated Regional Office has been created to stand alongside its Commercial and Industrial Development Bureau, Careers Advisory Service and Schools and Colleges Liaison Service.

Whatever the formal structure, the key issues for some universities is best reflected in the response of the University of Central Lancashire: "The mission statement commitment to the region is firmly embedded in the consciousness and responsibility of all staff.".

7.3 Relations with Local Bodies

Representation of the community on university committees and of university staff on outside bodies is one way of managing the interface. Here the very different constitution of "old" and "new" universities has an important bearing on how this is structured.

The statutes of "old" universities often require formal (ex officio) representation of outside bodies such as local authorities. In contrast, the "new" universities, in the words of the survey respondent from Coventry University have "deliberately moved away from the representational model of formal membership of committees".

Thus 68% of "old" universities have city and 60% have county representatives on committees. The comparable figures for "new" universities are 31% and 11% respectively. "New" universities have therefore tended to turn their backs on their parent bodies, to involve individuals rather than organisations in their governance structures and to give these individuals more authority.

So while the courts of "old" universities will include wide-ranging community representation (eg, churches, local authorities, trade unions, the voluntary sector, other higher education institutions), the role of the court is largely symbolic. In contrast, governors of "new" universities are individually responsible for major aspects of the institution's work. Such distinctions reflect the different political climate and legislative context in which the "old" and "new" universities were established. But do such distinctions make any difference in the practice of university–community relations?

In terms of interaction with local authorities, 57% of universities have regular meetings, with a similar proportion reported for "old" and "new" universities. However, the topics under discussion do differ. New universities are more likely to be concerned with the well-being of the locality and to consider economic development matters, urban regeneration and labour market matters with the local authority. They are also more likely to be involved in joint projects with their local authorities.

However, top priority for discussion by both "old" and "new" universities is student accommodation. It is the main source of conflict mentioned by 42% of universities. Equal weight is also attached by both classes of university to planning and traffic management. Public access to the campus is a most important issue for discussion between "new" universities and local authorities possibly reflecting the much

more difficult space constraints under which the former polytechnics operate.

So, notwithstanding very different formal positions and any lingering misgivings about the nominal loss of control, 81% of "new" universities are able to report "very good" or "quite good" relations with local authorities compared with 43% of "old" universities.

Similar contrasts apply to university relations with other local bodies. For example, "old" universities have been slow to develop working relations with new agencies such as the local Training and Enterprise Councils – 50% of "new" universities meet regularly with TECs compared with 38% of "old" universities. 45% of "new" universities regard their relations with other bodies as "good" compared with only 26% of "old" universities.

Given that these relations are mostly concerned with issues of local economic development, it is not surprising to find that links with other bodies are strongest in universities located in the north as compared with the south. For example, more regular meetings occur with TECs, economic

development agencies and urban development corporations in the north than in the south. Similar differences arise between universities located in large metropolitan areas as compared with elsewhere – with the exception of London where universities are poorly linked into local economic development agendas. Industrial and trade union representation on university committees is also more likely in the north.

For some universities these links with other bodies are particularly important. For example, the Tyne and Wear Development Corporation is funding the building of a new campus for Sunderland University in an area abandoned following the collapse of the shipbuilding industry on the River Wear, and the new Northumbria TEC is funding the building of an extension for Northumbria University based on a large country house in a rural part of the county.

Another distinctive sphere of interaction is the health service. Unsurprisingly, given the long established nature of medical schools, which are all in "old" universities, links with health

authorities and trusts are stronger here. However, the position is being challenged through the increasing capabilities of "new" universities in fields such as nursing education. In addition, the shift of priorities in health policies towards prevention, better community care and better resource management is leading to stronger links between the training facilities of "new" universities and purchasers and providers in the health service market.

A further way in which the university interacts with the local community is via the appointment of university staff to local public bodies. 58% of "new" universities and 32% of "old" universities actively encourage this involvement. Most "old" universities have statutory appointment responsibilities such as governorships of independent schools. The growth of local quangos has rapidly increased the number of such positions, and staff from both "new" and "old" universities are also filling them in their individual capacity.

For example, at least two vice-chancellors sit on TEC boards. However, only ten "old" and two "new" universities keep a full
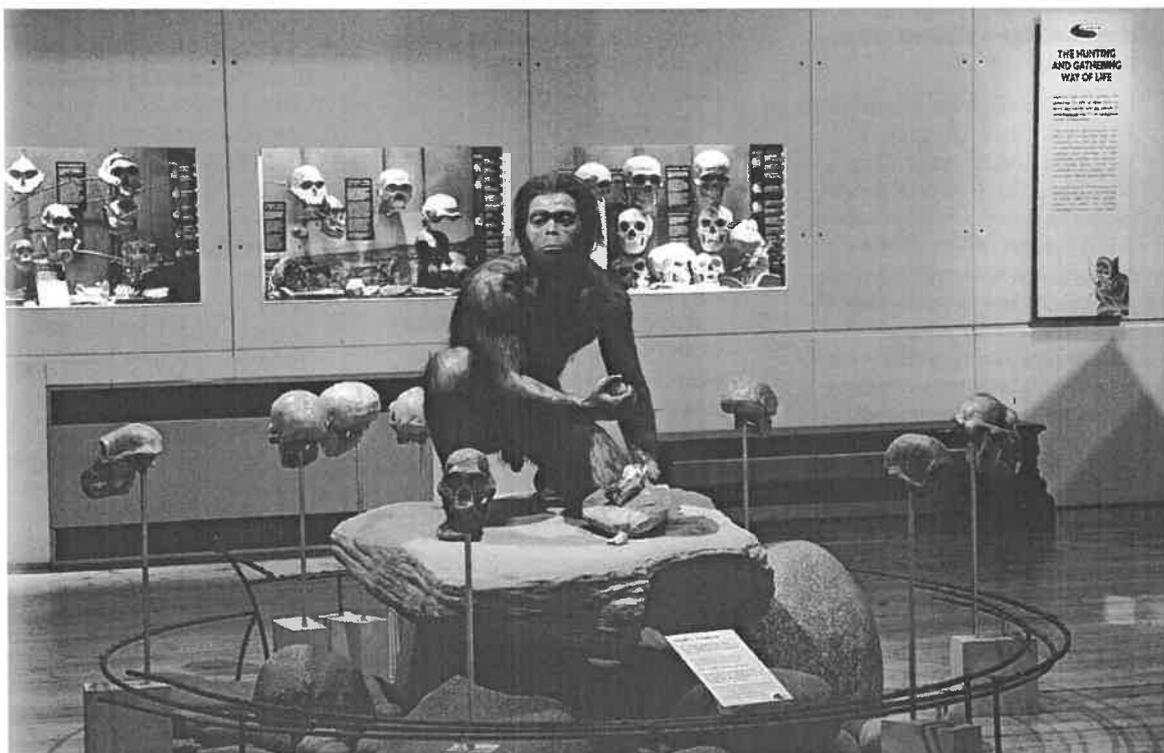
University museums provide the missing link

record of all participation in local bodies. Whilst this form of activity is monitored through staff appraisal systems it is not intelligence that is centrally gathered as part of the monitoring of university involvement with the community.

Table 7.2 shows the extent to which members of staff of two universities, Warwick and Sheffield Hallam, which do keep records of community links, are involved in community affairs. This pattern is probably repeated in a large number of other universities and localities. Universities are therefore a major resource in terms of the functioning of local "civil society".

7.4 Community Access to University Facilities

Universities sometimes possess a number of physical facilities than can be of benefit to the local community. These include libraries, sports grounds and halls, theatres and concert halls, historic buildings and museums. The campus itself, university grounds, parks and gardens are also potential community amenities. Possession of such facilities varies between universities as does policy towards access. Table 7.3 shows that it is generally the "old" universities which are most well endowed and which have the most liberal access policies.

Referring to specific examples, 29% of universities provide free public access to their libraries and 56% limited access. Only 15% charge for this access. 56% provide access to sports facilities on a charged basis. Similar figures apply to theatres and concert auditoria. A fifth of student unions provide limited access to their facilities. 87% of "old" and 59% of "new" universities provide free public lecture programmes. Around three quarters of "old" universities provide access to their campus and grounds compared with two fifths of

Table 7.2: Examples of University Staff representation on Community Institutions/Private Companies

WARWICK UNIVERSITY	NUMBER OF STAFF
District/County Councillors	4
Training & Enterprise Council Boards	2
Health Authority/Trusts	5
School Governors	25
Company Directors	10

SHEFFIELD HALLAM UNIVERSITY	NUMBER OF STAFF
District/County Councillors	20
Training & Enterprise Council Boards	5
Health Authority/Trusts	2
School Governors	12
Company Directors	20

Note:
These are examples from the twelve universities which claim complete staff records on community participation

Table 7.3: Public Access to University Facilities (majority responses)

	"OLD" UNIVERSITIES			"NEW" UNIVERSITIES		
	FREE	LIMITED	NONE	FREE	LIMITED	NONE
Library		●			●	
Departmental Library	●					●
Sports Facilities	●			●		
Parks	●					●
Gardens	●					●
Campus	●			●		
Grounds	●			●		
Historical Buildings		●				●
Theatres		●				●
Concert Halls		●				●
Student. Unions		●			●	
Public Lecture	●			●		
Cinema			●			●
Exhibition Space		●				●
Conferences		●			●	
Catering		●			●	

Note: None = no facility and/or no access   Limited = restricted and/or paid access
Source: CURDS Survey (1993)

"new" universities reflecting the more restricted space and amenity value of their estates.

Some of these facilities were inherited by universities from other public bodies, some were endowed, some were established for the benefit of staff and students. For all universities the cost of continuing maintenance is a major problem. Some of these costs can be partially offset by charging. Many joint arrangements are being established with local

authorities and other local consortia for the management of community facilities.

For example, the University of Newcastle has handed over management of its Natural History Museum to the North of England Museum Service and is collaborating with Newcastle City Council and Northern Arts in the running of its Playhouse Theatre. Universities such as Oxford, Southampton, Sussex, Stirling, Warwick, Nottingham and Ulster

Table 7.4: Examples of University Participation in Local Growth Coalitions

INITIATIVE	UNIVERSITY/LOCALITY
Bradford Business and Environment Forum	Bradford
Coventry is Making It	Coventry
Dundee City Pride	Dundee
Euromotor	Birmingham
Huddersfield Regeneration Forum	Huddersfield
Leeds the Intelligent City	Leeds
The Newcastle Initiative	Newcastle/Northumbria
Nottingham Towards 2000	Nottingham
Portsmouth Forum	Portsmouth
Sheffield Technopole	Sheffield
Snowdonia Technopole	Bangor
South Coast Metropole	Bournemouth
Sussex Academic Corridor	Sussex/Brighton
Swansea City of Literature	Swansea
Tayside Economic Forum	Dundee
Wearside Opportunity	Sunderland
Western Development Partnerships	University of the West of England

Source: CURDS Survey (1993)

run arts centres or theatres in conjunction with their local authority or regional arts board. A number of universities such as Durham, Keele and Stirling are developing major sports facilities in conjunction with local authorities and the Sports Council, for joint use by staff, students and the community. Portsmouth shares facilities with the Royal Navy.

An important additional way in which many universities make their space available to the community is to provide accommodation for the offices and/or meetings of professional and voluntary associations. Some of these are relevant to industry, for example the West of Scotland Institute of Quality Assurance based in Paisley University and West of England Employers Federation at Bath. Others are related to cultural and social groups such as the Leeds Literary and Philosophical Society based on the Leeds campus and the Warwick Nature Conservation Trust on the Warwick campus. Many universities provide venues

for the meetings of regional branches of national/professional associations.

In short, universities provide an additional focus for the cultural and professional life of the nation outside of the London/Oxford/Cambridge triangle.

7.5 University Inputs into Local Economic and Community Development

The direct contribution of universities in support of local economic development through technology transfer, development of skills in the local labour market and support for the attraction of new mobile investment has been discussed in Chapter 4. Here we consider the universities' contribution to the less tangible aspects of the development process, such as building social networks that link key actors in the local community and feeding intelligence into these networks.

With the rolling back of the boundaries of the local state, central government is placing more and more emphasis in the process of local economic development on the formation of coalitions of actors and agencies; in particular it is seeking greater involvement of the private sector. Additional funding for some localities, such as the City Challenge scheme is indeed conditional on the formation of such coalitions. Other bodies like Business in the Community and a host of *ad hoc* business leadership teams have been established in numerous cities.

European Regional Development Funding is also predicated on the existence of well developed partnerships between central and local government, including trade unions and higher education. Funding under European Community regional programmes such as STRIDE supporting technology transfer in the less favoured regions also requires a linkage of R&D capacity in universities to local industry. In most instances of these urban and regional policy initiatives, senior staff from universities have played a key role in launching and supporting leadership groups and providing strategic inputs into European initiatives. Table 7.4, culled from responses to our questionnaire, lists some of the examples.

Whilst some of the initiatives highlighted in Table 7.4 might be described as "local boosterism" or "gentlemen's dining clubs", university participation can inject an element of informed realism into such networks. A key role for universities in such situations is to provide independent analysis of local and economic, social and environmental circumstances in their national and international context.

Most universities included amongst their departments and academic staff expertise in economic and social analysis which they make available to local development agencies and growth coalitions. For example, CURDS undertakes a wide range of studies for local as well as

national and European bodies. Similar work is undertaken by the Institute of Local Government Studies at Birmingham University which has strong links with Birmingham City Council.

Leeds University, in conjunction with other universities in the area, runs the Yorkshire and Humberside Regional Observatory which monitors developments in the regional economy. In Sheffield a key role for the Regional Office is to encourage students from a wide range of departments of the University to undertake collaborative research projects with local companies and public bodies as part of their degree programme. Its scheme, which is entitled Project Link University of Sheffield (PLUS) is a unique experiment in harnessing the analytical knowledge base of the university for the benefit of local organisations.

As noted in Chapter 6, another way by which the knowledge base of universities is mobilised in several universities is through the contribution of academics to the local media. University public relations officers provide lists of experts in a wide range of fields and these are used by the local press, radio and TV to provide comments on local, national and international events. Local events can also be put into their national international context and the local implications of national and international developments highlighted.

Successful economic and social development, we would argue, depends on all of the actors in local networks having a realistic understanding of the way their local community functions. Common Purpose, a national initiative which aims to foster that understanding, has established city-based programmes to bring together middle management from private, public and voluntary sectors to discuss key issues in the future development of their cities. In a number of cities, such as Newcastle, Coventry, Bradford and Bristol, the universities support Common Purpose through participants and members of local steering committees. Newcastle,

Radio Wear FM – universities on the air

Durham and Manchester Metropolitan also provide free office accommodation for their local programmes. Through these and other initiatives universities are contributing to more self-aware and knowledgeable local communities.

7.6 Facilitating Access and Continuing Professional Development

The responses to our questionnaire reveal a rich network of informal relations between the universities, local professions, local industry and commerce, local authorities and further education colleges. Universities support these networks by providing accommodation and meeting rooms, undertaking analysis, bringing together different interest groups and generally acting as an "honest broker".

These informal relations are being increasingly formalised and encompass collaboration between universities within an area. Many universities now run regular dining clubs for local businesses which are being supported by newsletters and other information services, operating under formal titles such as "The Portsmouth Forum", "Brunel Business Partnership and Research Club", the "Renfrew Education and

Business Partnership", "Manchester Business Links".

Some of these arrangements focus on particular professions such as a legal practice centre at Exeter University and a similar centre at Cardiff. Collaboration between universities is increasing with initiatives like Higher Education in Support of Industry in the North East (HESIN) embracing five universities (Newcastle, Northumbria, Sunderland, Durham and Teesside).

Within this wide spectrum of activities there are areas where the universities do have very clear vested interests, particularly in relation to: initial education and training, as this can influence the recruitment of new students; the placement of existing students for work experience with local organisations; and opportunities for the provision of courses in relation to continuing professional development. Most of these are local. The proportion of local students and the proportion who are mature students in "new" and "old" universities recorded in response to the questionnaire is shown in Tables 7.5 and 7.6.

Not surprisingly, "new" universities have a higher proportion in these categories. 77% of "new" universities have a policy towards access compared to 55% of "old" universities. However, an equal proportion of

"old" and "new" universities have formal relations with gateway colleges. Both types of university are involved in local access consortia.

A prominent example of such a consortium is CONTACT in Manchester, which embraces all five institutions in the city. Although competing for students, universities clearly recognise that they will collectively benefit by raising the educational aspirations of the population in areas where there is a weak tradition of staying on in higher education or seeking it later on in life.

Access is also being achieved by increasing use of distance learning technology. The role of the Open University, although not covered in this survey, is important here. In addition, a number of universities are developing their own broadcasting initiative. Several are developing relationships with local cable TV companies who are eager to make use of spare capacity. Already radio is a widely used medium, with over two universities running radio stations, chiefly through student unions for entertainment purposes although these are often limited to campus areas.

A particularly interesting example is WEAR FM which is run from the campus of Sunderland University.

The service operates 24 hours a day, 7 days a week. It provides training opportunities for Media Studies students, as well as acting as a channel of communication for distance learning for a number of courses. It is also a commercial venture generating income for the university.

7.7 Conclusion

Reviewing the responses to our questionnaire and the supporting material provided by universities we are struck by the variation in the way in which relations with local communities are handled. These reflect different interpretations of the university's mission, differences in the mix of mainstream activities (for example, whether there is a medical school or other professionally orientated departments) and differences in the local context (for example, the presence of an urban development corporation and related inner city problems).

Amongst those universities that have hitherto not had a strong local orientation (the majority of "old" universities) there is a growing recognition of the importance of the community and a desire to improve relations with it. At the same time there is a wide range of outside bodies seeking to

Table 7.5: Estimated Proportion of Students from Local Area/Region

% Students	% Universities "Old"	% Universities "New"
Less than 20	47.4	11.1
20–39	26.3	18.5
40–59	5.3	29.6
60–79	5.3	14.8
Over 80	2.6	11.1
Non response	13.1	14.8

Source: CURDS Survey (1993)

Table 7.6: Estimated Proportion of Students who are Mature Access Entrants with Non-conventional Qualifications

% Students	% Universities "Old"	% Universities "New"
Under 10.0	29.7	11.1
10–19	43.2	29.6
20–29	8.1	11.1
Over 30	5.4	14.8
Non response	13.5	33.3

Source: CURDS Survey (1993)

tap into the human and physical resources of universities.

Last but not least, national policies in such fields as vocational education, urban policy and planning, and technology transfer all have differential implications for universities and their links with their local communities. In consequence, we are witnessing a system which is undergoing rapid change.

From describing this system we go on in the final chapter to discuss how links between universities and their communities might be best managed in the interest of both university and the public at large.

Fount of wisdom – Shirley Payne uncovered the secret history of Fountains Abbey as a mature MA student at the University of Teesside

8 The Way Forward

8.0 Introduction

The traditional view of the university is that it stands at the apex of civil society. Its essential role has been seen as the pursuit of knowledge and the recruitment, from whatever locality, of the brightest students, educating them to form a future national and international elite. Whilst that mission remains an ideal for some parts of some universities it is no longer a fair reflection of the present day UK university system.

Notwithstanding the abolition of the distinction between universities and polytechnics, a much more diverse pattern of higher education is emerging as a result of the operation of the market forces of research selectivity, student choice and the diversity of local environments within which universities are situated.

Even amongst those universities with the strongest research base and most developed international links it is apparent that research strengths in certain fields particularly within engineering, medicine and social science have benefited from links with local industry, local authorities and community groups. Teaching as well as research has gained from such links, for example through student placement and the general widening of educational experience.

At the same time, income derived from locally based research, advice to firms and vocational education has proved an important supplement to that from central government and international business. For more locally rooted universities with fewer national and international links, the robustness of local demand for courses and services may be central to survival.

In both instances, universities have not only to recognise the importance of the local environment to their operations but to appreciate how their actions can make an impact on that environment, possibly along the lines set out in the idealised planning cycle shown in Figure 8.1, (taken from the institutional plan of the University of Central Lancashire).

In addition to academic peers and the funding councils, this environment is composed of three principal constituencies – business, local government and central government with specific powers and resources with which to ensure that these policies are implemented (Figure 8.2). Implementation within these constituencies takes place through the actions of a wide range of agents, many of which have been referred to in this report.

But for many of these outside organisations, the university remains a "black box". In so far as its structures and procedures are transparent they rarely seem to follow the model set out in Figure 8.1. The challenge to universities and the outside community is to identify mechanisms for better structuring university–community relations which recognise the very distinctive procedures of universities, procedures which differentiate them as institutions from government and business.

In the following paragraphs we set out some preliminary thoughts as to how this restructuring might be done. The discussion focuses on universities themselves and on central and local government on the assumption that, in a market economy, government will take account of the interests of industry.

In what follows, it goes without saying that improved links between universities and their communities should not be seen as a panacea for all community ills, nor a solution to any of the many problems confronting vice-chancellors and principals. It is clearly a matter for individual universities and particular communities to determine their own priorities.

8.1 The University Perspective

The responses to our questionnaire and our knowledge of particular universities suggest that universities interact with their local communities on a broad front. In addition to the centrally managed facilities and activities, the really important interactions are undertaken in an independent and decentralised way by departments, individual academic staff, student unions and students themselves.

Even the central activities, such as estates, personnel, purchasing, and industrial liaison, operate separately with limited lateral communications in terms of implications for the local community. Some universities have recognised this problem by the establishment of new structures such as the University of Sheffield's Regional Office. But before such structures are put in place we would argue that the university should undertake a thoroughgoing base-line audit of its links with the local community.

There are several ways in which an audit might be undertaken. The simplest would be via a one-off questionnaire survey of the external activities of all academic and academically related staff which is then updated regularly. By covering all activities and including adequate locational coding, such a survey would allow flexible definitions of the local community.

Additional returns would be required of heads of departments to cover collective rather than individual interactions, such as student placements. Questionnaires would need to cover the topics addressed in this report such as links with industry, public bodies and cultural activities. Periodically the survey might be used to obtain information on expenditure patterns necessary to undertake proper economic impact analyses. A separate exercise undertaken in conjunction with student unions and a stratified sample of undergraduate, postgraduate and part-time students would also be necessary.

At first sight this might seem to be a highly intrusive exercise. Nevertheless, as far as the academic staff are concerned much of the necessary information is recorded in CVs which are used for staff appraisal purposes. Unfortunately much of this information is "not brought back to the centre" to inform overall policy as distinct from decisions about individuals. Staff and students are the principal resource of the university and this resource needs to be mobilised for the benefit for the whole institution. Such mobilisation is dependent on adequate information. It is indeed ironic that outside bodies (like Japanese companies) make much use of existing databases like BEST (British Expertise in Science and Technology) whilst the press makes greatest use of lists of experts compiled by university public relations offices.

Having established the pattern of linkage, the next step must be to develop some system for focusing these links and exploiting potential synergy. Each of the areas of activity identified in this report needs a clearly identified node or "socket" in the university into which individuals and organisations in the local community can "plug".

Within the university academic departments, central services and individuals can clearly make contributions to several nodes –

we are thus referring to overlapping networks. In many universities potential nodes already exist, for example, in the form of industrial liaison and continuing education offices. But these lack the information and clear central strategy to enable them to work together in a proactive manner.

To dynamise the system the nodes need to be brought together on a regular basis in meetings chaired by the vice-chancellor. Such a forum should be charged with driving through a community development strategy and reacting to unforeseen opportunities for local engagement. Such a strategy needs to be informed not only by analysis of the university's own capacity but of the needs and opportunities of the local community. A university therefore need to undertake, possibly in collaboration with its local authority, a careful appraisal of the strengths and weaknesses of the locality.

A wide range of data on employment, occupations, unemployment, skills, small firms, births and deaths, etc., and social conditions is available from national statistics which will enable the university to profile its local community against the situation elsewhere and in terms relevant to its own needs. In addition, the university will need to identify the key actors and agents with which it does, or should, interact.

This is part of the process of defining the external plugs. This knowledge then needs to be made available through the internal university system and to inform a wide ranging internal debate so that all parts of the institution "own" the strategy.

8.2 Local Agencies

Just as the university needs to draw together its interest in the local community so too do the various agencies representing these community interests to the university. This is a key task for the local authority which uniquely has a territorial

integrating role spanning economic, social, cultural and physical development. Although the situation is improving, many local authorities are not fully apprised of the significance of universities within their areas to all of their own responsibilities.

An audit along the lines discussed above, undertaken by the university itself, would be a powerful mechanism for raising this awareness. An economic impact study of the type referred to in Chapter 3 and Appendix II may be necessary to drive home this importance in quantitative terms. But apart from its value in convincing sceptical local politicians, we would agree that such an impact analysis has little value on its own in informing the management of processes of interaction between the university and the community.

We would argue that the local authority should take the lead in identifying the key nodes amongst a range of local agencies and bringing these bodies together to develop a shared strategy for the university's interaction with its community. Such a strategy would involve additional inputs from training and enterprise councils, health authorities and trusts, chambers of commerce, enterprise agencies, the police, and other bodies responsible for sports, cultural facilities, tourism and the media.

Given the key role of central government departments in funding many of these activities the newly integrated regional offices of the Departments of Trade and Industry, Environment and Employment would have an important role to play in shaping the development of local strategies for the university system. Indeed our survey indicates that universities have been participating in the establishment of "one-stop shops" for the delivery of government advice to industry. There is scope for the same approach to be applied in other areas.

## 8.3 The Role of Central Government and the Funding Councils

A wide range of government departments generate and implement policies with direct or indirect impacts on the interaction which universities can and do have with their local community. Starting with the Department for Education and the Higher Education and Funding Councils, it is clear that the outcome of many current policy debates (for example, that concerning fees and how charging may affect the propensity of students to study at home; or that concerning non-vocational continuing education and the activities of students unions) will not only have implications for university/ community interactions, but *differential* implications between universities and cities.

In general, few analyses of local implications are undertaken to inform such new policies and little monitoring is undertaken of the local impact of established policies. In particular, national statistics concerning the geography of student recruitment and the destinations of graduates are not generated from the appropriate UCAS and university returns. Financial returns on university expenditure are also not presented geographically.

Whilst the collection of such information might seem a burdensome requirement, the widespread use of postcodes and readily available geographic information systems make the capture of such information relatively easy.

Such analyses could inform the territorial planning of the university system itself. The UK now has a very comprehensive network of universities covering all the main centres of population. However, through the operation of market forces in higher education, this system is being increasingly differentiated in a rather *ad hoc* way.

Figure 8.1: University Planning and the External Environment
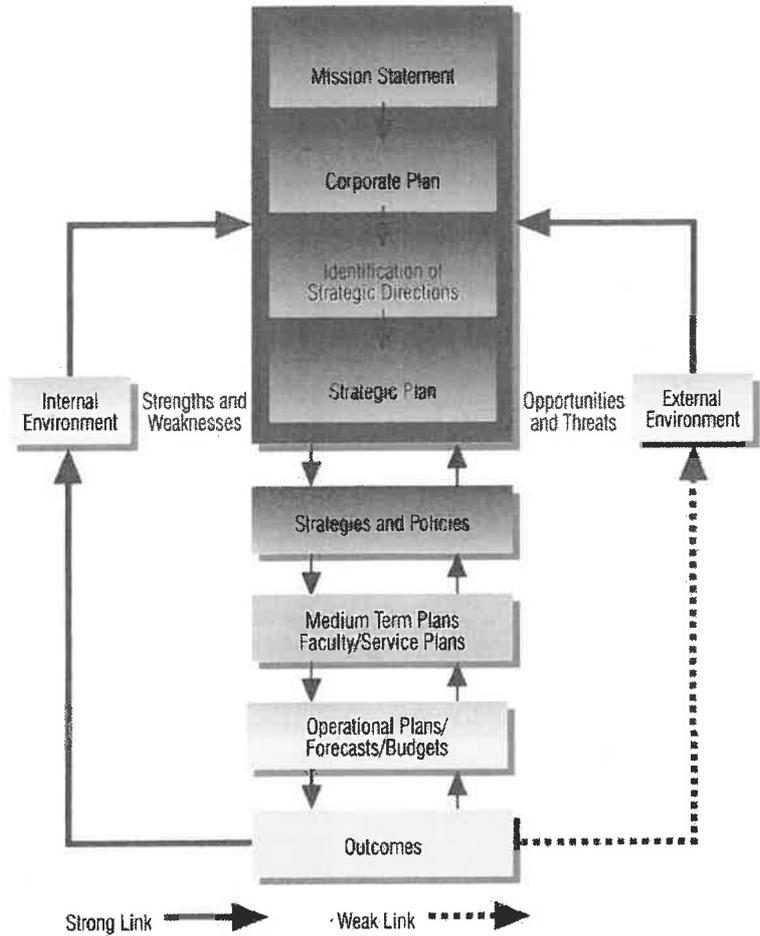
Source: University of Central Lancashire (1993)

Whilst bottom-up co-ordination is occurring, for example through links between universities and further education colleges, a top-down view of university provision in particular cities, most notably London, has yet to emerge. The existence of separate funding councils for Wales and Scotland and the work of the Northern Ireland Office ensure that such planning is possible for parts of the UK. In England, however, there is a case for stronger central planning of the system at a regional and sub-regional level.

Any such planning would need to take account of the involvement of a range of other central government departments. In addition to the Department for Education there are other obvious players, such as the Department of the Environment. This is responsible for land-use planning guidance to local authorities with respect to

universities, grant regimes relevant to the construction of university halls of residence and the budgets and activities of urban development corporations. The Department of Employment, responsible for TECs, and the DTI for regional financial assistance and technology transfer, also have roles to play.

The Office of Science and Technology, with responsibilities for research councils, has an important role in monitoring the research funding available to universities which can in turn influence regional and local capacity for technological development. As regards the cultural and recreational spheres, the Department of National Heritage which is responsible for regional arts boards, the Regional Executive of the Sports Council and the regulation of local radio, is another important central

government department. Finally the decisions of the Department of Health and the National Health Service Executive will also be important in shaping future interactions between university medical schools and the community.

For each of these bodies the territorial development of the university system and interactions with the rest of the economy and society at the local level is at best a secondary concern. The Department for Education is the obvious lead department, but it is notoriously difficult for a single department to trespass on the bailiwick of another. The most promising possibility would be for the Office of Public Service and Science, which has responsibilities for OST and the Civil Service as a whole, to take a lead. Following the lines of the wide ranging White Paper on Science and Technology, the Office and its minister could co-ordinate all policies that impinge upon university interaction with the community across the whole of England.

8.4 Towards the Bottom Line

Our experience tells us that co-ordinating public policies without the lubricating effect of additional funding is an almost impossible task. Many vice-chancellors have identified involvement in the local community as an important part of their university's mission but

Universities open wide

cannot link initiatives in this sphere to any immediate and specific income stream.

The situation is different in the United States where there are close connections between the prosperity of the individual State and the funding of State universities. If the consensus of policy makers in different departments of government and in various local agencies is that university/community interaction must be encouraged, then a budget for initiatives in this sphere needs to be created. Experience with the European Regional Development Fund and the European Social Fund, suggests that opening up a new source of funding to universities has drawn forth a number of highly imaginative schemes for creating university interaction with its community.

Through the Community Support Framework programmes, mechanisms have been established for drawing together partnerships of local authorities, other public bodies and universities to prepare regional development strategies. Such arrangements could be required to include sub-programmes which focus on universities and the community in the areas covered by the ERDF and ESF.

In other parts of the country not covered by these schemes, similar arrangements could be put in place but utilising UK resources. These resources might be diverted other expenditures currently reaching universities by other routes (eg, TECs, DTI, UDCs, research councils). Unless such frameworks for local and regional action are drawn up there are dangers that the system of university interactions with the community will evolve to look like that described for local economic development by the Audit Commission – a "patchwork quilt of idiosyncrasy and complexity".
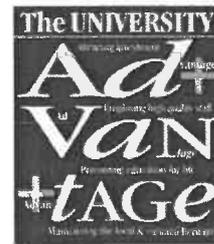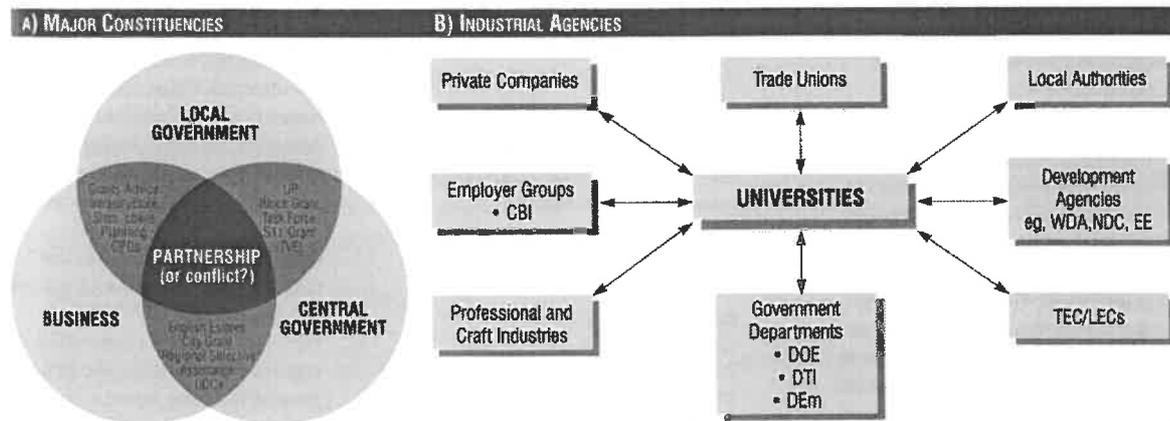
Figure 8.2: University Interactions with their Environments

Source: CURDS (1994)

Appendix I

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Appendix II: The Impact of Higher Education Institutes on their Local Economy: A Review of Studies and Assessment Methods

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A number of studies have been carried out in the UK since the late 1960s on the local economic impact of Higher Education Institutions (HEIs). Almost all of the studies have focused on a single HEI and most adopt a Keynesian multiplier approach. The reasons for carrying out such studies appear to have changed over time (although not all studies make their purposes explicit). The early studies were contributions to a body of local impact assessments carried out by economists investigating spatial imbalance and the appropriate methodologies of regional analysis. Specifically, they were concerned to discover whether public expenditure on university education might reduce regional imbalances thereby improving the macroeconomic performance of the economy. Many of the post-1980 studies reflect a growing concern on the part of the HEIs themselves to demonstrate that they make a significant contribution to their local economy, particularly given the expansion in student numbers. A major objective, therefore, has been to produce a set of numbers which strengthen the HEI's promotional activities. Of these later studies, a number are brief unpublished assessments which, although they adopt a Keynesian multiplier approach, provide little discussion of methods. While the concern with spatial imbalance meant that the earlier studies were frequently of

HEIs in relatively depressed regions, many of the more recent studies are of HEIs which are not located in what are usually considered as depressed local economies.

It is our view that the change in emphasis and purpose of the studies – and the continuing interest in producing them – should have led to a more critical review of the methodology than has occurred to date. A number of methods are potentially available to measure the impact of HEIs on the local economy: Keynesian multiplier analysis; input–output analysis; and social accounting/social cost benefit analysis. All of the available methods have the disadvantage that they rely on rather restrictive assumptions. It is worth exploring the assumptions of each method in some detail as these are not made explicit in many of the studies here reviewed. A good survey of all the methods and the assumptions upon which they are based is set out in Lewis (1988b), while Bond (1993) provides a good critical review of both multiplier and input–output analysis. The following section provides a critical evaluation of each of the techniques. A review of previous impact studies (Section 3) provides the basis for the identification of good practice methodology used in such exercises (Section 4).

2. Alternative Methodologies

2.1 Keynesian Multiplier Analysis

Multiplier analysis has a long history and many of the

contributors to the theoretical discussion have been acutely conscious of the complexities of the concept (see Bond, 1993). However, almost all of the studies of HEIs abstract from them and see a stable relationship between an initial injection of expenditure or employment and a larger (multiplied) final level of expenditure/ output or employment in a region.

In their usual form the studies are based on the assumption that an injection of expenditure into the HEI leads to expenditure by that institution on staff salaries and goods and services and this, together with spending by students coming into the region, raises output and hence income in the region. This (first round) increase in incomes in the region leads to subsequent rounds of spending by those benefiting from the expenditures and so on. The addition to the level of expenditure/income with each round of spending beyond the initial injection steadily falls as leakages occur principally to imports (goods and services from outside the region) and taxation (both direct and indirect). The raised levels of expenditure might be expected to induce further capital investment in the region but this effect has not been specifically calculated in any of the studies apart from that of Stirling University by Brownrigg (1973), and thus they are implicitly assuming the existence of spare capacity.

The size of the multiplier is determined principally by the assumptions made about the leakages both in the form of spending on goods and services from outside the region, and as taxation. It is usually assumed that

the smaller the region the smaller will be the multiplier, although the treatment of the size of region is not consistent across the studies. While distinctions are frequently made in the studies between expenditure, income and economic base multipliers, and sometimes subtleties are introduced in relation to migration of labour, most of the studies come close to what has been termed the "hydraulic" Keynesian or crude demand–dominated multiplier (Bond, 1993). This version of the multiplier ignores problems of the supply side of the economy which have been given so much prominence in macroeconomic debates since the late 1970s.

The employment impact has usually been calculated as direct employment by the HEI, plus indirect employment, which is calculated either by dividing the additional expenditure occurring outside the HEI in the first and subsequent rounds by an estimate of the average value of the output per employee, or by the application of an employment multiplier (frequently borrowed from another study). The recent study by Armstrong (1993) is notable for the fact that it explicitly incorporates – in addition to the usual multiplier effects – a link between HEI activity and employment levels in the local public sector.

The assumptions (more often than not implicit) of these studies may then be broadly summarised as follows:

1. An elastic supply in the local economy of the types of labour needed to meet the demand generated by the HEI

2. Spare capacity in the industries or services meeting the demands generated by the HEI

3. Uncongested social overhead facilities (including transport. health and education)

4. Spare capacity in housing/accommodation

5. The HEI-associated expenditures have no impact upon the price/wage levels in the local economy

6. If the study is forward looking it is assumed that the pattern of leakages will be stable over time

7. The possible impact upon expectations is ignored

8. There are no distortions in local capital markets.

This approach to multiplier analysis appears to be more applicable to a relatively depressed local economy with unemployed labour and under-utilised capacity in industry, services, social overhead facilities and housing. The sort of question it is best suited to answer is, "how far does an HEI raise the level of economic activity in the short to medium term in the local economy?"

A major disadvantage of the approach is that it takes little or no account of the distinctive character of higher education. The HEI is being valued simply in terms of the flow of spending it generates. If the output of the HEI is considered at all, it is measured simply as the total level of spending on inputs (staff and others) by the HEI. The value of the education and the external benefits (dynamic and static) of higher education are not taken into account. Nevertheless, multiplier analysis continues to be the overwhelmingly popular technique for three reasons: the theoretical concerns in regional policy of the authors of the early studies; the relative simplicity of the method; and the ease of availability of major elements of the data.

2.2 Input–output Analysis

The second method available for assessing the impact of an HEI on the local economy is input–output analysis. This method has been used in two studies, those relating to the Universities of St Andrews (Blake & McDowall, 1967) and Strathclyde (McNicholl, 1993). The approach itself was developed by Leontief in relation to a national economy, but there was a growth in interest in regional input–output modelling in the UK from the 1960s.

Central to this approach is the attempt to establish how much of the output of an industry/sector is used as an input in production by each of the other industries/sectors, and how much is purchased by final consumers. The data are used to calculate a matrix of coefficients showing the pattern of inter-industry purchases (transactions matrix), both within the region and between the region and the outside world, and a vector of final demands by consumers.

The assumptions of this approach are again quite restrictive: fixed-input coefficients in production in all sectors of the economy; constant returns to scale in all industries; and the use of a set of constant coefficients which fixes the pattern of flows and makes no allowance for technological progress. However, from the point of view of the HEIs wishing to carry out impact studies, a greater problem is the availability of relevant data to construct a local input–output table. Although some attempts have been made to construct input–output tables for English regions, they have frequently had to adopt national coefficients because of the absence of relevant local data. This approach imposes the strong assumption that the pattern of trade between industries within a region conforms to the national pattern. The Scottish studies have had the benefit of the specially constructed Scottish input–output table, but this relates to a much larger region than most HEI impact studies have sought to consider. Even in Scotland the collection of data to calculate coefficients has only occurred once a decade. so the information being used could be several years out of date.

The attraction of the input–output approach is that it offers the prospect of a disaggregated picture of the impact of an HEI, showing the sectors for which demand and hence employment will be increased. However, like multiplier analysis, input–output

analysis does not take into consideration the distinctive nature of higher education, but simply the pattern of spending flows that it generates.

2.3 Social Accounting/Social Cost–Benefit Analysis

The third possible approach to assessing impact, the social accounting/social cost–benefit approach, would appear not to have been applied with any thoroughness to HEIs. The method has its origins in theoretical welfare economics. It has been used to consider such matters as the effects of the closure of a steel works (JURUE, 1979). Several studies of HEIs, for example the ones relating to Nottingham University (Bleaney *et al*, 1992), Southampton University, (1991) and University of Greenwich (Roger Tym, 1993) do at points in their discussion incline toward a welfare theoretic rather than macroeconomic (multiplier) framework of analysis. The social accounting approach involves the specification of all the costs and benefits arising from an activity. By adopting the perspective of different decision-makers – for example, local, regional, national – in deciding which benefits and costs are to count in any analysis, it would be possible to use the approach to address the impact at different spatial and administrative scales. In principle this approach allows attention to be given to the distinctive nature of the outputs of HEIs. In practice the measurement and valuation of the output in the sector has not proceeded very far, although the human capital approach offers one avenue toward valuation. In its social guise, this form of analysis allows also for the inclusion of the external benefits of higher education. The study focusing on Warwick University (Warwick Research Institute & Segal, Quince, & Wicksteed, 1989) represents a first step in identifying the range of research and consultancy linkages between the University and local businesses. These linkages do not always involve financial flows, but

nevertheless give rise to benefits to the local economy.

3. Review of Previous Impact Studies

The review covers seventeen studies relating to HEI local impact carried out within the UK, some of which have not been published, and it has been necessary in one or two cases to rely upon summaries. In terms of their objectives and quality the studies vary considerably. Early studies were conducted in a period when there was much interest in extending the methodology of regional impact analysis to non-industrial activities such as HEIs. Studies of the income and employment impact using regional income multipliers and input–output analysis respectively, of Stirling University (Brownrigg, 1971) and St Andrews (Blake & McDowall, 1967) were thus more than mere case studies. Brownrigg's study of Stirling is one of a number of impact assessments he carried out using the Keynesian multiplier approach. It constitutes an important study from the methodological perspective, but, because it relates to a new university in its construction phases, is very much a special case. A further (unpublished) study of Exeter University's impact (Lewes & Kirkness) was carried out in the early 1970s.

No further studies appear to have been undertaken in the UK until around 1980, when there was a sudden spate of such assessments (University of East Anglia; Bolton Institute of Higher Education; Newcastle Polytechnic; South Shields Marine & Technical College and Hebburn Technical College; the (sixteen) HEIs of Yorkshire and Humberside; and Bristol Polytechnic). These were followed by impact studies of Lanchester Polytechnic at Coventry (Mallier & Rosser, 1986) and Wolverhampton Polytechnic (Lewis, 1988a). Apart from the (very short) assessment of the regional impact of the University

of East Anglia (UEA, 1982), the studies which appeared during the 1980s concentrated on polytechnics and colleges, prompted possibly by concern over reductions in local public expenditure on higher education, and particularly their impact upon polytechnics and colleges. Some of these studies are relatively unsophisticated and devote little attention to methodological concerns. They are characterised by minimal efforts at data collection, and rely upon borrowed rather than calculated multipliers (see summary and analysis of early 1980s studies by Ruel & Taylor, 1986). The 1982–3 study of Lanchester Polytechnic, as reported by the authors in a subsequent journal article (Mallier & Rosser, 1986), does offer a useful outline of practical methodological issues but its estimate of the impact of the Polytechnic on the Coventry area is somewhat rudimentary.

The most thorough and methodologically useful studies which appeared during the 1980s were those relating to Bristol Polytechnic (1982) and Wolverhampton Polytechnic (1988). Each makes clear its approach to impact assessment, identifying the direct income and employment associated with the respective HEIs and, with the aid of a calculated multiplier based on selected coefficients, estimates the indirect income and employment generated in the local economy. Another systematic study using the multiplier technique carried out in the 1980s was that of Love and McNicholl (1988) which confined itself to estimating the regional impact of overseas students studying at three Scottish universities.

There has been considerable interest in carrying out HEI impact studies in the 1990s of which seven are reviewed here. One, by John Moores University of Liverpool (1993), considers the impact on the local economy of both of Liverpool's universities and affiliated institutes. It takes into account the impact upon

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Merseyside of more than one HEI – and would thus be expected to be of particular interest, given the fact that many urban areas now possess more than one university. Although it presents a substantial amount of data, the methodology is relatively crude.

The report on the impact study relating to Durham University is still in preparation and only a summary is available (Lewis & Townsend, 1993). This indicates that considerable effort has been devoted to data collection and refinement, but the form and derivation of the multipliers employed are not discussed. Also among the recent studies is a distinctive one relating to Nottingham University (Bleaney *et al*, 1992). This study assesses the impact of the institution not just in terms of its gross output effects on the local area, but in terms of the output and income effects upon the *pre-existing* population. It assumes that if the university did not exist, then academic and academic-related staff would work elsewhere and not be living in Nottingham. Since the salaries of this "migrant" group do not add to disposable income of pre-existing Nottingham residents, to measure the welfare impact on the local area they argue it is necessary to leave out of account the disposable incomes of the migrants themselves. A number of the other studies refer to the migrant issue, but do not make such a distinction in the assessment of local impact. Perhaps the main contribution of this study is that it raises the issue of precisely *who* are the beneficiaries of HEI activity.

The studies relating to the University of Greenwich (Roger Tym, 1993) and the University of Southampton (1991) are distinctive chiefly because of the attention they give to growth and change – including possible locational change and the development of new sites. Both also devote considerable space to a discussion of the wider (ie, non-multiplier) impact of the university on the local economy

and community, although they do not attempt to provide empirical magnitudes of these effects. Armstrong's study of Lancaster University (1993) is systematic and thorough both in relation to methodology and the collection and presentation of data.

The Strathclyde University study (McNicoll, 1993) is the first such UK study for nearly thirty years to use input–output tables to assess impact. The fact that the author had previously been engaged in updating (to 1989) the Scottish Input–Output Table plainly offered the opportunity to make use of it in this way. Faced with the problems of applying national coefficients at the level of the conurbation, the author opted for purposes of the study to define the "local economy" as the whole of Scotland. As noted above, the scarcity of impact studies using the input–output approach reflects the unavailability of tables relating to local economies, and for practical reasons the technique will to continue to be of limited relevance to institutions seeking to conduct such an analysis.

3.1 Definition of "Local Area"

The review of studies showed that geographical areas of impact have frequently been determined by descriptive convenience (usually administrative boundaries) rather than a considered view of what constitutes the "local economy". Studies relating to polytechnics and colleges are usually simply of their local authority areas. The impact areas considered vary greatly in size and character, ranging from small and relatively isolated urban areas of below 100,000 population (eg, Stirling and St Andrews) to standard regions (eg, Scotland [Strathclyde] and East Anglia). Some of the polytechnic studies have encountered problems because the local authority area is actually part of a larger conurbation with extensive linkages and commuting. This is the case with the Newcastle study (which might usefully have

defined its local area as "Tyneside") and Wolverhampton (one of the campuses of which is in neighbouring Dudley). The latter case led to the author opting for a local area of "Wolverhampton and its surrounding areas". The Durham University study, recognising the problem of too narrow a definition of "local", chose specifically to calculate effects at a number of scales (Durham City, Durham County, Tyne & Wear, and the North East), although there is at present insufficient information available on the methods employed in this research to assess what this system of different spatial units meant for the data collection exercise and calculations of the multiplier. The University of Greenwich study similarly considers more than one impact area definition.

3.2 The Multiplicand

The four items considered here represent the principal elements forming the multiplicand (that is, the initial exogenous change in income or expenditure in the local economy). There is not a consistent approach to the calculation of the multiplicand across the studies. The majority ignore construction (see below) and calculate the injection on the basis of staff salaries and wages, HEI purchases of local goods and services, and student expenditure. Beyond that, the various studies make different adjustments (for example to the treatment of taxes) and in some studies these adjustments are also combined with modifications to the multiplier.

3.2.1 HEI Staff Expenditure: Data on numbers and earnings of academic and non-academic staff are readily available and it is common for those conducting studies to disaggregate this information according to residential location in relation to the defined "local area" to produce a measure of local expenditure. One or two (not especially successful) efforts have been made to elicit responses from employees on additional income from consultancy, etc.

None of the studies appears to have undertaken a survey of staff expenditures, which would reveal information on (a) the level of spending in the local economy by staff living outside the defined boundary, and (b) the extent of staff spending in the institution itself (eg, cafeterias, staff bar, parking permits). The latter enables the investigator to avoid double-counting in estimating local expenditure by the institution and its staff. None of the studies appear to have incorporated either of these elements, although in one study (Bristol) the authors took the view that the spending in Avon by those staff living outside was too small to be worth considering.

3.2.2 HEI Purchases of Goods and Services:
Many of the studies appear to have made attempts to gather data on the level local spending by their respective institutions. This has usually been done through a sampling method (eg, 20% of all spending) or by analysis of all purchased items above a certain value

3.2.3 Student Expenditure:
Figures relating to students present a more difficult data collection problem than those for HEI staff, reflecting the fact that students are more numerous, more mobile, temporary, and perhaps more reluctant to supply information on income and pattern of expenditure to the institution to which they are attached. Typically, the studies have tended to ignore the part-time students, on the grounds that they were likely to live locally, and would not be away studying elsewhere if the HEI did not exist. The same, of course, applies to a proportion of the full-time students who come from the local area, but this is ignored in most studies, which do not even attempt to identify the size of this group. (The Wolverhampton study is an exception, assuming that 50% of the home-based full-timers would not move away to study if the Polytechnic did not exist.)

Generally, student expenditure is estimated as the total number of full-time students multiplied by the full grant figure. A number of the more detailed studies go beyond this and distinguish between undergraduates, postgraduates and overseas students, applying different grant or expenditure levels to each category. One or two of the studies attempt to allow for periods of non-residence and travel to and from home; yet others, recognising that the value of the maintenance grant has been eroded and is not now a good guide to student expenditure, use figures derived from DES and other previous research to identify the true level of spending for the average student. Because the share of student spending which takes place on campus (photocopying, cafeteria, bars, accommodation) is substantial, the more detailed studies (eg, Bristol Polytechnic) specifically allow for this in their estimates in order to avoid double-counting.

The varying arrangements for the payment of fees by part-time students and the possible impact on the spending power of these students has not been recognised in any of the impact assessments to date.

3.2.4 Capital Projects:
In only a few of the studies reviewed is this item explicitly considered. The principal exception is the impact study relating to Stirling University in the late 1960s and early 1970s, which was undergoing rapid development at the time. One recent study which does incorporate capital spending as a specific item is the study of Lancaster University (Armstrong, 1993). It is possible or even likely to be the case that some capital programme spending is incorporated in annual budgets (as HEIs purchases of goods) and has been included accordingly in the estimates of impact contained in various studies. With recent and anticipated expansions in HEIs, these injections should be considered specifically, especially given the distinct nature of the impact on the local economy arising out of such expenditures.

3.3 Income/Expenditure Multiplier Values

Calculation of the impact of HEIs on the local economy depends significantly upon the value of the multiplier used, and one of three methods is usually adopted to determine its value. The first approach is to simply *assume* a value for the local multiplier, as in the study of the impact of the Bolton Institute of Higher Education (McKenzie, 1982), where a value of 3.0 is chosen. This is the highest value used in any of the impact studies under consideration and, as Ruel and Taylor (1986) have pointed out, it is a significant overestimate; they suggest a value of around 1.2 would have been more appropriate.

Secondly, a number of studies have used multiplier values developed previously in the regional economics literature. For example, the impact study relating to Stirling University (Brownrigg, 1974) used a lower multiplier value of 1.24, which was derived from the work of Brown *et al* (1967), and an upper value of 1.54, from Greig (1971b). Other studies have applied values derived from local economic impact studies of activities in other sectors of the economy. Thus Mallier and Rosser (1986) use a value of 1.5 (based on a range of values of 1.2 to 1.7) for the Coventry study. The Liverpool impact paper (John Moores University, 1993) assumes a value of 1.45, based upon an assertion that "estimates for the size of the required multiplier indicate that additional income of between 33% and 50% of original expenditure will be generated, and it is assumed that Merseyside is nearer the latter figure. A multiplier of 45% is assumed for the purposes of this report" (John Moores University, 1993, p. 19).

The third and preferable approach is to calculate a value of the multiplier by specifying its components and then estimating these components from available data. This procedure was undertaken in the Bristol (Braddon *et al*, 1982), Wolverhampton (Lewis, 1988)

Nottingham (Bleaney *et al*, 1992) and Lancaster (Armstrong, 1993). For example, the Bristol multiplier has the form:

$$k= \frac{1}{1-c\,(1\text{-}t)\,(1\text{-}m)}$$

where c = marginal propensity to consume (mpc)

t = tax share (%)

m = marginal propensity to import

The numerical values of the first two coefficients were calculated using UK data from *Economic Trends* (1982). The mpc is estimated from consumption data for the last three quarters of 1981 and the first quarter of 1982, and the share going to tax is taken as the proportion of GDP of tax and national insurance contributions in 1981. The marginal propensity to import is based upon an update of Steel (1969). The estimated values of the coefficients were thus:

$$c = 0.87 \quad t = 0.40 \quad m = 0.75$$

Using these coefficients yields a multiplier value of 1.15.

Armstrong's study (1993) is based on a more sophisticated version of the Keynesian multiplier. Recognising that small area multipliers are dominated by first-round effects, his model disaggregates the multiplier to allow for first-round and subsequent-round effects. His estimated values for the income multiplier (1.15–1.25) nonetheless do not differ significantly from calculated multipliers in other studies.

A number of issues arise with respect to these calculations. In the first place, it is not clear that the apc derived from national data is a good approximation for the study area, but the use of regional data may represent only a marginal improvement. Secondly, there is the problem of obtaining an accurate estimate of the leakages from the local economy. Thirdly, there is the problem of the sensitivity of the estimate of impact to small changes in the values of the parameters. All estimates of the impact of HEIs on the local economy must therefore

be treated with caution, although it is clear from the studies that multipliers calculated in the manner just described yield a more conservative estimate of the multiplier (range 1.059–1.15) than do the first two approaches. Table 1 provides a summary of the multipliers values used and the source from which they are derived.

3.4 Estimating the Impact upon Local Employment

Two methods have been used to calculate the impact of HEIs on employment in the local economy: the direct application of an employment multiplier (the ratio between direct employment by the institution and the total employment, which is generally based on estimates from impact studies of other sectors or simply assumed), and the output/income-per-job approach. A number studies use the employment-multiplier approach, for example, the Stirling study (Brownrigg, 1973) uses an estimate from Greig (1971); the Newcastle study (Dick & Wood, 1980) applies employment multipliers from two sources, one based on estimate by the Northern Region Strategy Team with a value of 2.51, the other from Greig with a lower upper values of 1.7 and 1.9 respectively; the study of Coventry (Mallier & Rosser, 1986) simply assumes a value of 1.5. The Lancaster study (Armstrong, 1993) contains a systematic attempt to derive an employment multiplier using using a range of multiplier coefficients estimated for the University, which yields a figure of 1.26.

The output-per-job approach calculates the ratio of income generated by the HEI but spent outside that sector and the average output/income per job in the UK. This method is systematically applied in the Bristol study (by Ruel & Taylor, 1986), where the total impact of polytechnic expenditures in other sectors was estimated to be £18.2m. The average output per job was calculated by dividing GDP by total employment in the UK, producing a value of £9,948. On the basis of these figures it

was estimated that 1,828 jobs had been created in non-polytechnic sectors of the local economy. Using this method, the ratio of non-polytechnic-created employment to polytechnic employment is 1.41:1.

3.5 Induced Investment

While, theoretically, any expansion in local demand for goods and services in the local economy resulting from increases in HEI spending can lead to further expenditures in the form of new investment to meet the additional local demand, most of the studies reviewed related to static rather than dynamic situations and the authors either altogether ignored induced investment, or noted it and left it out of account. The Stirling study is an exception, but given the context – a new and growing university and heavy associated inflow of migrants – the inclusion of a value for induced investment was warranted. The recent growth in student numbers in particular, together with their spatial concentration, suggests that giving more attention to induced investment may be justified in future impact assessments.

It is important to note that the term "induced" is used in some studies to refer to the later rounds of multiplier impact upon current income/expenditure, whereas the above discussion relates to new capital investment in other sectors induced by the activity of the HEI.

3.6 Non-Quantifiable Benefits

Many of the studies discuss, or at least refer to, the external benefits associated with HEI activities in the local area. Apart from social and cultural benefits, positive externalities have been identified in relation to enhanced capacity to attract inward investment and the potential to improve the quality of the local stock of labour through students at the local HEI remaining in the area after graduating. The study of Warwick University's impact upon the local economy (Warwick Research Institute & Segal, Quince, &

Wicksteed, 1989) deals at some length – but does not attempt actually to measure – the positive benefits to the local economy arising out of linkages between the University and businesses. The approaches which have been used to assess HEI impact are not appropriate for the systematic evaluation of these kinds of effect. As indicated in the first section, external benefits are best assessed within the framework of a cost–benefit appraisal.

4. Conclusion: Towards Good Practice in Impact Studies

This review of the studies of the impact of HEIs on their local economy suggests the following points as a guide to good practice:

1. Those carrying out the work should state clearly the objectives of their study – specifically, which question or set of questions they are attempting to answer. The concerns of the decision takers – in the HEI, in the local region, and nationally – are not identical. The range of concerns of any of these decision makers may change over time, and at any point in time some questions/concerns may assume much greater prominence. The nature of the questions/concerns has an important bearing on the choice of methodology for the study.

2. Having identified the most appropriate method for the study, it is important that those conducting the study make explicit all of their assumptions they are making.

3. Even where it is not possible to quantify particular elements of the impact, eg, induced investment, reference to such elements should be made in the study. If non-quantifiable elements are ignored, there is a danger of presenting only a partial picture of the impact to any decision maker. It is usually possible for those carrying

out the study to indicate the direction, if not the magnitude, of the effects upon the results.

4. The choice of a Keynesian multiplier approach means that the HEI can be valued for its impact on income, expenditure, or employment – and on output, but only in terms of input cost. In relation to Keynesian multiplier studies in general, Lewis (1988b) makes a number of recommendations for those attempting to conduct such analyses with very limited resources; these should be borne in mind when applying the technique to HEIs:

   a) concentrate on the multiplicand, which we know constitutes the largest part of the impact (see below);

   b) clearly specify the multiplier which is being estimated;

   c) borrow coefficients, rather than multipliers, because, for example, multipliers from earlier periods were calculated when the tax structures in the UK were very different from today's.

5. For the calculation of the multiplicand, two broad approaches can be distinguished in the literature. The first, and cruder, approach is to add together the gross expenditure of the Institution and the spending outside the institution by students. The second approach is to reduce the spending of the HEI to reflect the argument that some spending does not enter the local economy (effectively making a direct adjustment for first round leakages). There is no consistent practice in relation to the adjustments made, those most frequently applied are an adjustment for tax and national insurance remitted on behalf of the employees of the HEI, and adjustment for pay of staff who live outside the designated impact area.

The appropriate approach depends partly on the target concept, although as indicated, many of the studies are vague about purpose. We believe that most of the HEIs would find it appropriate to calculate this regional/local economic impact in terms of the change induced in gross local/regional income or expenditure at market prices. The underlying principle is to identify the increase in local value added. For these cases it is appropriate to use as the multiplicand the sum of:

   a) Gross expenditure by the HEI on staff living in the locality/region being considered (including employers pension and National Insurance contributions).

   b) An estimate of the spending in the locality/region by staff of the institution who live outside the locality/region,

   c) The non-staff expenditure of the HEI which is spent in the locality/region,

   d) Expenditure in the locality/region by students drawn into or retained in the locality/region by the presence of the HEI. (Adjusted, to avoid double counting, for spending by students on hall fees, student union, etc.),

   e) Gross expenditure by the Student Union in the locality/region,

   f) Off-campus spending in the region by visitors to the University for conferences or holiday letting.

6. The following points relating to data collection and estimation might therefore be considered:

   a) HEI Staff

   Identify from personnel records those members of staff living outside the defined local area and their share of the institution's wages and salaries bill. Student Union employment and

associated wages/salaries will normally be available from the Union accounts.

b) HEI Purchases of Goods and Services

Identify the proportion of the institution's spending going into the local economy through HEI records on financial transactions (via sampling?). Ensure that total purchases include those of associated activities (Student Union, halls of residence, joint ventures, etc.) are included, although care must be taken to avoid double-counting.

c) Student Expenditure

Obtain full-time student numbers and their main groupings – undergraduate, postgraduate, sandwich. Subtract from this those from the respective groups who are from the local area and who would not move to study elsewhere if the institution did not exist. In determining student expenditure in the local area it is increasingly unsatisfactory to rely on grants data alone; survey data is likely to be of particular value in determining this. Care must be taken to avoid double counting in relation to student spending which takes place within the institution (eg, spending in the Student Union and payment of hall fees). Specific adjustments might be considered in relation to sandwich students.

d) Construction Programmes

If a building programme is in progress, then this needs to be distinguished in HEI spending; duration and pattern of linkages are specific and it might be appropriate to treat the impact of this form of injection as a separate item.

e) Expenditure by Visitors

Off-campus spending by visitors to the university (arising from vacation lettings and conferences) could be estimated.

7. Estimates of impact arising out of such studies might usefully be compared to total income and employment in the local economy. The size of the institution vis-a-vis other major employers can also be considered. The relative scale of effect may be more important in many decision contexts than the absolute magnitudes.

8. Opportunities for input-output analysis are likely to be available only to a few institutions. The cost of constructing a suitable input-output table solely for the purpose of assessing the impact of an HEI would be prohibitive. The alternative – borrowing coefficients, either from national tables or from tables constructed for other regions – seems likely to produce a seriously inaccurate and misleading picture, and for reasons discussed above is best avoided.

9. Because of the distinctive character of the output of HEIs, and the widely expressed belief in the existence of significant external effects associated with HEI activity, there is considerable merit in giving more attention to the social accounting/social cost-benefit approach. This type of approach seems well suited to addressing some of the questions which are current in HE policy circles and which, in our view, are best handled within a welfare theoretic framework.
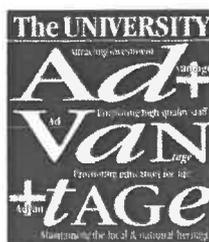
Table 1: Summary of Multiplier Values used in HEI Impact Studies

Study	Multiplier Value	Source
Stirling University (Brownrigg, 1974)	1.24 1.54	Brown *et al*, (1967) Greig, (1971)
Newcastle Polytechnic (Dick & Wood, 1980)		No estimate of multiplier
Bolton IHE (McKenzie, 1982)	3	Assumed
Yorkshire & Humberside HEIs (Bowers *et al*, 1981)	1.3	NEISR
South Shields & Hebburn Colleges (NETUSIU, 1982)	1.3	Bowers *et al*, (1981)
University of East Anglia (1982)	1.2	Brownrigg, (1974)
Bristol Polytechnic (Braddon *et al*, 1982)	1.15	Calculated mpc and tax share from *Economic Trends*. Import share updated from Steel, (1969)
Lanchester Polytechnic (Coventry) (Mallier & Rosser, 1986)	1.5	Assumed mid-value of estimates (1.2–1.7) in previous literature
Wolverhampton Polytechnic (Lewis, 1988)	urban = 1.027 region = 1.103	mpc based on national data 1961–83. Direct & indirect tax shares – Treasury data estimates 1980/81. Marginal propensity to import (for urban and regional areas) adaption of Steel, (1971)
Warwick University (WRI/Segal, Quince, & Wicksteed 1989)		No calculation
Southampton University (University, 1991)	1.197	From previous calculations (Smith & Heathfield, 1991)
Nottingham University (Bleaney *et al*, 1992)	1.059	Assumed value of mpc. Tax shares from *Economic Trends* (1990)
Durham University (Lewis & Townsend *et al*, 1992)		No calculation
Liverpool & John Moores Universities (John Moores University, 1993)	1.45	Assumed value – mid range of previous estimates
Lancaster University (Armstrong, 1993)	Staff earnings 1.20 Student spending 1.25 Other 1.15	Direct calculation based on estimates of local parameters
Greenwich (Roger Tym & Partners, 1993)		No calculation
Strathclyde University (McNicholl, 1993)	Output = 2.15 Income = 1.66	Multiplier values calculated on the basis of 1989 Scottish Input-Output Tables

Table 2: Studies Of the Employment Impact of HEIs: Definition of Area, Methods Used and Results

Study	Definition of Local Economy	Estimation of Employment Impact	Employment Impact	
Stirling University	Parts of counties of Stirling and Perth (pop. 96,000)	a) Product per job method b) Employment multiplier (Grieg)	Indirect Construction Indirect (est) 1976 1981	850–1690 ·300 900–1740 1600–3100
Newcastle Polytechnic	City of Newcastle upon Tyne	a) Employment multiplier 2.51 (Northern Regional Strategy Team b) Employment multiplier 1.7–1.9 (Grieg)	Direct Indirect Total Total	1350 2038 3388 2362–2565
Bolton IHE	LEA Area	No calculations		
Yorkshire & Humberside HEIs	Yorkshire & Humberside	Income approach (Av. earnings implied £8338)	Direct Indirect Total	20,400 35,200 55,600
South Shields & Hebburn Colleges	South Tyneside	Product per job method (Product value per job implied £8700)	Direct Indirect Total 2100	800 1300
University of East Anglia	Region	No explicit discussion of calculations	Direct Indirect Total	800 1000–1200 2857–3057
Bristol Polytechnic	Avon County	Output per job (product value per job £9948 from UK data)	Direct Indirect Total *2500 if migrants excluded	1300 1828 ·3128
Lanchester Polytechnic (Coventry)	Local Authority	Employment multiplier assumed value 1.5	Direct Indirect Total	1580 820 2400
Wolverhampton Polytechnic	"Wolverhampton and surrounding areas"	Output per job (£11,500)	Direct Indirect Induced Total	1331 596 169 2096
Warwick University	CV (Coventry) postcode area	Indirect – based on update of Lewis, (1988) Induced – assumed multiplier value of 1.1	Direct Indirect Induced Total	2350 550–850 290–320 3190–3520
Southampton University	"Southampton and region"	Income based estimate	Direct Indirect Induced Total (PT University excluded)	2438 1619 856 4913
Nottingham University	Nottingham travel to work area (650,000)	No calculations		
Durham University	Durham City, County and Tyne & Wear	Specific method of calculation not available	Direct Indirect Total	1352 1453 1703
Lancaster University	Lancaster & Morecambe Council	Calculated employment multiplier 1.26	Direct Indirect Total	1352 351 1703
Greenwich University	1) Dartford 2) East Thames Corridor (pop. 1.5m)	Indirect – income based calculations a) University purchases £50k local v-a sales/job b) Staff/student spend £23K v-a per job Induced – employment multiplier from Lewis, (1988)	Dartford Direct ETC Indirect Dartford Indirect ETC Indirect Dartford Induced ETC Induced Dartford Total ETC Total	909 909 527 942 39 191 1475 2042
Liverpool & John Moores Universities	Merseyside	No calculations of indirect	Direct	6285
Strathclyde University	Scotland	Employment multiplier 2.37	Total (Direct Indirect	5380 42.2% 57.8%)

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Appendix Two – The Impact of Higher Education Institutes on their Local Economy: A Review of Studies and Assessment Methods

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Appendix III: Universities as Civic Institutions: Lessons from the USA

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Introduction

We might ask just why universities would wish to become more involved in their communities at all? If their primary purpose is the advancement of knowledge, relationships with the immediate community are arguably a tangential matter. I shall argue, based on the experiences of a number of institutions in the USA, that this would represent a limited view of the potential scope for universities to engage with their local communities in order to enhance their role in teaching, research and public service. By encouraging community involvement as a structured educational experience and research strategy, universities can better contribute to producing an educated citizenry. Instead of asking what universities can do for their communities, we might ask how community involvement can contribute to the core business of universities. I therefore raise questions about the social purposes of education, and about the purposes and practicalities of partnerships between higher education and other organisations.

Educating for Citizenship: Student Volunteerism, Study Service, and National Service

Students are higher education's largest resource, and given the likely future importance of the voluntary sector, we must prepare future generations for participation in voluntary activities. Currently, student participation in community service is largely an extra-curricular matter. Though it is growing – witness the rapid expansion of the BP/CSV Learning Together scheme – there is little integration, outside professional schools, of community involvement into academic courses.

The situation in the USA is very different. There are national coalitions of university presidents (Campus Compact) and of students (Campus Outreach Opportunity League) dedicated to promoting volunteerism and its integration into the curriculum. Around one-third of all universities fund student community service programmes. The National Postsecondary Student Aid Study indicated that 26% of undergraduates were involved in campus-based service in 1990; 32% of students in the California State University system volunteered. Some institutions report that up to two thirds of their undergraduates are involved in campus-based community service. The federal Commission on National and Community Service funds numerous higher education-based schemes.

Longitudinal data suggests an upward trend in student participation. The proportion of students who have engaged in community service in the year prior to entering college has risen to nearly two thirds. Around one fifth think it highly likely that they will engage in volunteer service during their college careers This more practical engagement in social problems is combined with a decline in participation in formal political activities.

From the positive climate of support for volunteerism have sprung debates on how best to incorporate it into higher education. Community service projects are an established part of freshman orientation programmes; while some universities have considered mandating community service as a graduation requirement. Also common are a range of study service schemes in which students engage in service and then, in class, participate in sessions which encourage them to reflect on their service. Academic credit is given for reflection on their experiences. Service learning may be easier to incorporate into the broad-based American undergraduate system than into a single-honours degree structure, though modularisation may help change this situation. This is only a partial explanation, for in the USA, higher education institutions stress that service is part of a broader education for citizenship and for participation in political life. Advocates would contend that all students need to acquire the transferable skills they can obtain through service-learning: skills in collaborative working, communicating ideas, negotiation and so on. In Britain, under the Community Service Volunteers (CSV) initiative, Community Enterprise in Higher Education, students carry out a research project on behalf of community-based organisations, thus deploying their academic skills in a community context. The Merseyside and Manchester "Research Exchanges" perform a similar function, matching community needs with student assignments.

The American emphasis on service links into Clinton's National Service scheme, under which students will perform community service at minimum wage rates (plus health

insurance); in return they will receive vouchers to be used towards education and training costs. There have been suggestions from the higher education community that, rather than serving either before or after higher education, students should be encouraged to serve while they are studying. This would maximise the educational benefits of service and give universities a chance to expand their service-related courses and deepen their involvement in their immediate communities. The pilot "Summer of Service" scheme, in 1993, funded projects in a variety of locations, involving partnerships between universities, health institutions, and community-based organisations, addressing such issues as low immunisation levels or the needs of "at risk youth" in inner cities, mobilising impressive numbers of service participants and community volunteers, and stimulating interdisciplinary cooperation within universities. The great risk of national service, however, is that if introduced as a form of "workfare", without a properly structured educational component, it would lose some of its potential to motivate people to participate in volunteerism.

The Purposes and Practicalities of Partnerships

Whatever the motivations for the growing involvement of American universities in their communities, there is a realisation that higher education has not responded to pressing social needs -- some, such as former Harvard President Derek Bok, suggest that universities are doing their least impressive work on the country's greatest social problems -- the collapse of communities in its decaying inner cities. This is hardly surprising given the reward structures of American higher education, and the same is substantially true of Britain. Of course, many staff of higher education institutions are involved, in personal capacities, as governors, councillors and so on. As a matter of corporate

citizenship this should be encouraged, but it will remain on the margins of institutional activity without greater incentives towards service. In the USA the American Association of Higher Education's (AAHE) Forum on Faculty Roles and Rewards is considering examples of good practice which institutions might emulate in giving weight to contributions to public service. But the free enterprise culture of higher education does not readily reward the kind of collective, participatory or collaborative activity associated with a long-term commitment to community organisations or to community-based research.

For students the transformation of higher education institutions into entities which genuinely serve their local community might require the following: an expansion of opportunities for community service, perhaps by creating a network of coordinators at individual institutions; less emphasis on the single honours degree system and more scope for flexible, modularised courses, which would facilitate the integration of community service and academic study; and a reform of financial aid, so that instead of being grant - or loan - based, assistance would be conditional on having engaged in community service either before or during higher education.

Much innovation in the USA is derived from grant programmes run by various government agencies and foundations wishing to promote new thinking about the social purposes of higher education. As well as the national service legislation (and its associated state and local programmes), there are grant programmes run by: the Fund for the Improvement of Postsecondary Education (FIPSE; oriented towards curricular innovation); the federal Department of Education, through its Urban Community Service programme; and foundations such as the Pew Charitable Trusts which sees universities, through its Community Compacts for

Student Success, as foci for community partnerships to improve primary and secondary education. Collectively these and other programmes seek to stimulate urban institutions to consider ways in which their resources might better be targetted on community needs and to engage in more meaningful partnerships with their neighbouring communities. Funds for such innovation, let alone implementation, are not as easily or as widely available in the UK with its monolithic funding bases for higher education.

Summary

The core business of universities is education. Restating this obvious point may lead to a sharper focus on community involvement. Memberships of governing bodies or statutory agencies, breakfast meetings between chief executives and senior university personnel, ad hoc task forces - these are all very well, but community links can reduce to symbolic gestures and talking shops which salve more consciences than they solve social problems. Perhaps the key question is: how far does community involvement pervade the research and teaching functions of the institution? We might consider three consequences of greater community involvement for these activities:

Service as part of an education for citizenship: If properly integrated into academic programmes, service learning, with its emphasis on problem solving and reflection, may also help equip students with transferable skills. As universities increase in size, engaging students in this kind of activity could make a substantial impact on local schools and voluntary organisations. Whatever party is in government, the role of the voluntary sector will increase, and this is one way to help individuals prepare for that.

Community links: orienting research and other efforts towards the needs of the community requires different ways of working

than those driven by HEFC assessment criteria. If a university is to be more engaged in its community it might be characterised by a greater emphasis on participatory research (rather than the unidirectional linkages characteristic of much academic work) and on cross-disciplinary collaboration (rather than disciplinary and departmental fragmentation). The new universities may also have to consider whether, in seeking to improve their research ratings, they will lose their strong local grounding and links with community organisations; the older institutions may need to consider whether the lack of perceived strong local links will detract from their identity.

What sort of community and what sort of university? Possibly the strongest social contribution universities can make is directing their teaching and research activities towards the goal of rebuilding the social fabric and reconstructing a sense of community, thereby helping the nation feel more "at ease with itself", in the Prime Minister's words. In this context, the more universities' internal operations are driven by an intense competition for research funds, the less likely they are to foster a sense of communal involvement and cooperation, and the more likely they are to promote a competitive individualism which pays little regard to a wider notion of community.

Appendix IV: List of Respondents

Aberystwyth
Anglia Polytechnic University
Bangor
Bath
Birkbeck College
Birmingham
Bournemouth
Bradford
Brighton
Brunel
Cambridge
Cardiff
Coventry
Cranfield
De Montfort
Dundee
Dundee Institute of Technology
Durham
East London
Essex
Exeter
Glasgow
Guildhall
Heriot-Watt
Hertfordshire
Huddersfield
Hull
Humberside
Imperial
Keele
Kent
Kings College, London
Kingston
Lampeter
Leeds
Leeds Metropolitan
Leicester
Liverpool
Manchester
Middlesex
Newcastle
Northumbria
Nottingham
Oxford
Oxford Brookes

Paisley
Plymouth
Portsmouth
Robert Gordon
Royal Holloway
Reading
Salford
Sheffield Hallam
Southampton
South Bank
Staffordshire
Strathclyde
Stirling
Sunderland
Sussex
Swansea
Teesside
Ulster
UMIST
Westminster
Warwick
West of England
York

List of Late Respondents Not Included in the Statistical Analysis
Aberdeen
Central Lancashire
Derby
Glasgow Caledonian
Liverpool John Moores
Surrey
Sheffield

List of Non Respondents
Aston
Bristol
Buckingham
Belfast (Queen's)
Central England
City
East Anglia

Edinburgh
Glamorgan
Goldsmith's College
Greenwich
Lancaster
London School of Economics
and Political Science
Loughborough
Luton
Manchester Business School
Manchester Metropolitan
Napier
North London
Nottingham Trent
Open University
Queen Mary and Westfield
College
St Andrews
Thames Valley
University College (London)
Wolverhampton

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Adrian
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