9

THE ENDURANCE OF THE DISCIPLINES

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EPIGRAPH

The importance and fascination of the [characterisation of academic disciplines and their distinctive disciplinary cultures] lay in its depiction of a passing world, of tribes already on the verge of extinction, except perhaps in places like Oxford, or Harvard. ... Knowledge communities are simply too diverse, and too separated from their previous location within a place called "a university" to develop a culture. (Ryan, 2002)

THE NOTION OF A DISCIPLINE

There was a time when membership of a recognised discipline was a significant part of the identity of a practising academic (Henkel, 2000). It is a measure of recent changes in higher education that such a claim is no longer valid. Its clientele has widened and its landscape has substantially changed: values and traditions have – if sometimes reluctantly – evolved to meet new imperatives (Brennan and Shah, 2000). Practising academics today are not necessarily members of disciplines, and for some, the very notion of them is lacking in relevance. To understand the place of the disciplines in academic life, it is first necessary to review what is understood by a discipline and to examine the new ways in which knowledge is used, including the contrasting notion of a community of practice.

Disciplines have two distinguishable but interconnected aspects, which may be denoted as the cognitive and the social (Becher, 1989; Becher and Kogan, 1992). As far as the cognitive characteristics of a discipline are concerned, there has to be some recognisable – even if disputed – boundary marking off its particular area of academic territory. Related to this, the basic knowledge domain falling within that boundary has to be clearly identifiable, usually providing the material for the associated undergraduate degree programme. Most disciplines will also have their particular techniques of enquiry, their established research methods and their own set of

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required resources (Clark, 1983). And crucially, a discipline must be able to sustain an active and reasonably well-organised research frontier or pattern of conceptual development, without which it will face stagnation and atrophy.

The social features include, firstly, incorporation within a typical academic organisation. To be rated as a discipline, it is necessary to become part of the working structure of a reasonable number of universities, in the sense of undertaking relevant scholarly activities, including the provision of courses at undergraduate or advanced level. Such courses serve among other things as a formal induction to membership of a disciplinary community. There is also a need, at least at a basic level, for a shared set of cultural values. However much doctrinal controversy might arise within a disciplinary group, there has to be some sense of common concern (Becher, 1989). But the most significant feature of all is recognition by the Academy at large: only when a scholarly community is deemed intellectually acceptable by its peers, is it qualified to achieve disciplinary status.

These various considerations, it should be noted, do not imply that disciplines once established are stable and unchanging entities: indeed, they resemble living organisms in being in a constant state of flux. It is also easy to identify the emergence of new subdisciplines and the changing interactions between existing ones (Becher, 1990). On the cognitive side, one can observe their steady growth by accretion as new findings are made or new interpretations established. Major conceptual revolutions, such as that famously explored by Kuhn (1962) are a rarer occurrence, though when they occur they are liable to bring about a seismic shift in the configuration of the discipline concerned. In addition to these cognitive forms of change, disciplines may undergo social upheavals, such as the attempted take-over by one grouping of another – exemplified by the bid in the 1960s by physics to incorporate aspects of biology – or a steady decline in intellectual prestige – as in the case of the classics in the post-war period.

Thus, taking a traditional stance, one may see disciplines as reasonably well-organised and well-defined elements at the core of the higher education system, giving shape to its communal and epistemological structure, while remaining adaptable to circumstances. In one of the dominant views of higher education in the past, as comprising the pursuit of knowledge for its own sake, the less applicability to everyday life the purer the claim to disciplinarity. Even the relatively long-established fields of applied knowledge, such as medicine, engineering, law and education, were until recently seen as outsiders, not deserving admission to the heartlands of academia. The shift from this perspective (see, for example, Delanty, 2001) has had more dramatic consequences than any of the changes mentioned above.

Gibbons et al (1994) described the shift as one from the traditionalist, discipline-based mode of knowledge production (Mode 1) to a broader conception in which application and negotiation with users of knowledge are predominant (Mode 2). In

this shift, the legitimisation of knowledge is seen as taking place in new ways, fuelling the debate about whether the power of science lies in its internalist, self-regulatory authority, or whether – as Latour (1998) argues - it is a construct more deeply rooted in its social context. Kogan (2005) accommodates both these perspectives, pointing to the power-knowledge nexus through which the authority of knowledge is generated from within a group of experts such as a discipline, while at the same time, different forms of knowledge reinforce different philosophies of state and professional control in society. Nowotny, Scott and Gibbons (2001), however, remark on the decoupling of science's useful outcomes from its cognitive authority, and assert that the epistemological core of contemporary knowledge is empty. At the same time, though, they allow that the "agora" – and therefore the boundaries – of reliable knowledge are greatly extended in the current context.

COMMUNITIES OF PRACTICE

A rival view of the academic endeavour - its organisation and spheres of influence - has emerged over the past decades. Lave and Wenger (1991) offer the notion of situated learning in which individuals learn from their social environments, forming social identities, taking on community values and accommodating their social structures. They argue that communities of practice, such as midwives, tailors, quartermasters and butchers, are made up of experts. When novices engage with an expert in the social setting of the community of practice, they do so to a limited degree and with less responsibility for the outcome. In this way, the novice learns from the experts. Lave and Wenger (1991) describe this socially based learning as legitimate peripheral participation in the practice of the community, arguing that it is different from traditional notions of apprenticeship where the structures are more rigid and the rules of engagement more systematic.

The features of socially-based learning and knowing, Wenger (1998) argues, are readily observable in the professions and have four characteristic elements – community (learning as belonging), identity (learning as becoming), meaning (learning as experience) and practice (learning as doing). Together, these features shape learning, knowing and the development of perspective among community members.

Wenger (1998) points out that organisations, such as hospitals and universities, which house communities of practice typically do not acknowledge the social – and often tacit – nature of the learning they embody. The kinds of systems and structures needed to support communities of practice have recently been explored by examining areas of professional activity. Wenger, McDermott and Snyder (2002) argue that as a key requirement the community needs to focus on values because communities of practice vary; they may be distributed across sites, for example, or they may be

relatively new. These variations have implications for maintaining communities of practice, and in particular for supporting their host institutions.

The idea of communities of practice has a particular resonance in the context of higher education, and there is widespread acceptance that situated learning, or learning in a socio-semiotic setting, best describes how adults learn in universities. This description also fits well with the increasing professionalisation of awards and the vocationalisation of the curriculum. Although Usher, Bryant and Johnston (1997) question whether disciplines can be differentiated epistemologically or ontologically from socially-related forms of enquiry, well- established professional fields such as law, medicine and allied health fields have in fact long exhibited the characteristics of communities of practice, given that they have close proximity to their professional communities and that many of their research issues derive from practical concerns.

The emphasis upon the social rather than the cognitive aspects of communities of practice is reflected in the higher education literature, in well- established terms such as authentic assessment (Newmann and Archibald, 1992; Cumming and Maxwell, 1999); situated learning (Anderson et al, 1996); communities of learners (Parry and Dunn, 2000) and core skills (Fallows and Stephen, 2000; Gallagher, 2001). In addition, newer fields of study such as ecotourism, gambling studies, complementary medicine, sports management and journalism all reflect highly differentiated communities which draw upon knowledge from a variety of sources. They have in common a shared conception of community, identity, meaning and experience as practitioners. Since research problems in these new fields are derived from practice, knowledge must be gleaned from whatever source is appropriate to advance the field: thus they are usually transdisciplinary. The concern with values is less about the unity of the cognitive base and more about united conceptions of practice.

EXPANSION AND ITS CONSEQUENCES

The source of the interaction between disciplines and communities of practice can be traced back for more than three decades. As in the case of many other developments in higher education – see for example the demand for quality assurance - any significant policy initiative in one country is soon imitated in another, and then in another, until a large part of the academic enterprise is suffused with the change in question. In the present case, the policy was a highly significant one, supported both by governments and many of the universities themselves: namely the decision - against a background of relative stasis in student numbers – to opt for expansion. It was Martin Trow who first gave the phenomenon a vocabulary and a definition (Trow, 1970; 1974). National systems, he proposed, should be designated as elite if their age participation rate (the proportion of enrolled students out of the total num-

bers of a given age range eligible to be enrolled) fell below 15%; those lying between 15% and 40% could be described as mass; and those over 40% as universal.

There were few systems, in the developed world at least, which failed to take up the copycat policy to attain mass status. The pattern was not uniform (Kogan and Hanney, 2000): as Henkel (2000: 36) points out in the case of the UK, "government attitudes towards growth fluctuated considerably from the mid-1970s and the surge in numbers that occurred in the 1980s and 1990s could not be ascribed to planned and consistent government policies." In a number of systems, the exercise was in part a statistical one, involving the promotion of second tier institutions – polytechnics, technical institutes, community colleges – to first tier status, thus creating overnight a new tranche of undergraduate students. But whether by redefinition, political edict or changes in social climate favouring graduate status, student numbers have increased in country after country, sometimes to mass level.

Before the expansion began, it was the practice in a number of systems to offer the students accepted onto degree courses heavily subsidised – or even free – tuition, and in some cases maintenance grants as well. Alongside this, academics wishing to undertake research were able to do so with relatively generous state support. With comparatively small numbers, the costs involved amounted to only a small fraction of the national budget. But as the student population grew, it became increasingly obvious that the government would not continue to provide funding on anything like the earlier scale (Marginson, 2002). The larger student numbers brought with them increased – though not commensurately – intakes of academic staff, whose research costs could again not be maintained on the previous basis, with teaching and "other distracting duties" becoming increasingly pressing (Halsey, 1992).

Faced with considerably reduced funding for both students and staff, the universities have had to meet the deficit from other sources. The most accessible have proved to be industry and commerce and the students themselves. Understandably enough, the new industrial sponsors have been concerned to ensure value for money. Accordingly, they tend to favour industrially-related research and vocationally-oriented training programmes. Those disciplines concerned with knowledge which lacks direct application, or the potential for exploitation in the longer term, have found themselves increasingly starved of resources (Macintyre, 2002; Marginson, 2002).

From the student perspective, Kogan and Bauer (2000: 43) argue that the combination of economic stringency and a growing demand for higher education has given rise to greater accountability for available funds, and therefore to "questions as to whether the basic qualities and values of higher education were under threat and whether available resources were used efficiently". Henkel (2000) in turn observes that the common assumptions about what constitutes a university education began to change as the student body expanded. The first signs were the decline of the hu-

manities and the paucity of interest in studying classics, followed by the recession in "foundation" disciplinary areas such as physics and history.

Alongside this, many students came to see higher education as a credentialling exercise rather than as an educational process (Henkel, 2000:214). As the corporate aspects of higher education have become more emphatic, the needs of students as "customers" have become increasingly dominant, resulting in an explosion of undergraduate programmes in applied and vocational fields, from acupuncture and homeopathy to event management. This explosion has been fuelled by the incorporation of the college and polytechnic sectors with their inherently vocational emphasis, and by government policies that have encouraged links between industry, the professions and the world of work (see, for example, OECD, 1997).

At the same time, students in developed countries have found themselves increasingly responsible for the costs of their higher education. In England and Australia in particular, schemes for requiring students to meet a significant part of their tuition expenses have reached a high level of artistry. The result is that, by the time they have completed their studies, graduates may be confronted by debts equivalent to approximately half their first year's salary, albeit repayable over an extended period. The official justification for this practice is that those with degrees earn on average more than non-graduates, and may therefore legitimately be taxed on some of the value added.

It is not surprising that in consequence courses oriented towards the world of work – either in industry or in professional fields – are increasingly attractive (Bourner et al, 2001). So too are courses with fieldwork or work experience components. In their concern to accommodate the growing proportion of mature age learners who dip in and out of higher education while managing work and family responsibilities (Long and Hayden, 2001), many universities have created more flexible opportunities for study, based on such notions as "lifelong learning" (Candy, Crebert & O'Leary, 1994) and "recognition of prior learning". This development in effect presents higher education as a commodity, and has enhanced the market for professional courses (Symes, 1999).

THE NEW REFERENCE GROUPS

At the institutional level – particularly in England and Australia, the two main reference points of this discussion - the interaction of higher education with the working world (Kogan, 2000) has been modified to accommodate a diversity of organisational profiles. The tension between market-oriented course offerings and those based on a core discipline has moved markedly in the direction of professional awards – a development seen by some (for example, Evans, 2002) as "creeping credentialism".

One consequence of the tension between meeting consumer demand and building a disciplinary base, or "market and mission", is that – as Marginson (2000) notes – academics have become more "other-referenced" than "self-referenced". They are more closely associated with, and accountable to, vocational and professional reference groups, and there are wider accountabilities too. Not only must universities develop closer associations with external agencies in order to finance research as well as teaching: they must also shore up the opportunities for graduates in the workforce in accordance with market requirements.

The result has been a reshaping of the organisational landscape within institutions to accommodate the external reference groups at the expense of the knowledge areas which support them. Whereas in the past the configuration of disciplinary areas dictated organisational systems, newer reference points have come to take managerial precedence (see, for example, Knight and Trowler, 2001). Lomas (1997) presents this trend as an ideological struggle between those who are concerned to protect the traditional liberal ideal and those who have embraced corporate enterprise. However, this view fails to take account of the extent to which universities have freely chosen to become closer to their external reference groups.

The new reference groups in which knowledge is generated and becomes legitimated by universities include the professions, vocations, industry and community groups – Wenger's (1998) communities of practice. That legitimation is no longer, however, the special prerogative of academia. Whereas knowledge was in the past solely the universities' domain and privilege, where it was valued for its own sake, it now exists recognisably outside the Academy, where its justification lies in its being purposeful and pragmatic. The emphasis on academic communities of practice is reflected in the proliferation of professional and vocational awards – including masters and doctoral as well as undergraduate degrees – and in the organisational structures of institutions which in many cases have come to be built up around values and practice – for example Business and Management or Health and Applied Sciences rather than core disciplines in the arts, social sciences or science. Gibbons et al (1994) characterised the shift in emphasis as a new mode of knowledge production: a proliferation of many kinds of knowledge producers working in applied ways to solve practical problems**. A** recent Australian government report (McWilliam et al, 2002) goes so far as to describe research training as providing skills, and credentials as proxies for those skills, thus blatantly limiting the value of disciplinary knowledge to its practical application. While the value of the knowledge base becomes blurred in this way, the need grows for academic communities of practice to draw upon knowledge sources outside the academy. These new sources of knowledge are reflected in the changing nature of the research enterprise, which has itself become more interdisciplinary, and which also exists outside universities -for example in commercial and industrial settings (Symes 1999). There is a growing acceptance of

the need to draw upon knowledge from whatever source may be appropriate to the purpose, rather than from a single disciplinary corpus. As Kogan (2000:211) observes, "the sources of academic power and honour… including the professorial title, seem now more able to draw on other sources and reference points than that of core subject areas."

THE CONSERVATION OF ACADEMIC KNOWLEDGE

Our contention so far is that until the onset of mass higher education the pure disciplines enjoyed pride of status and the capacity to confer legitimacy upon professional fields. As the numbers increased, it became impractical for governments to continue to provide adequate levels of funding for both teaching and research. The new paymasters – mainly industry and commerce – helped to fill the gap, but their support was directed at entrepreneurial, applied activities at the expense of enquiry for its own sake. The result has been a reversal in prestige, with market oriented academic communities of practice, dealing in utilitarian pursuits, in the ascendancy. Pure research and non-vocational teaching programmes find themselves in decline, especially in non-elite institutions whose endowments and reputational standing do not allow scope for a range of such activities. Barnett (1997) calls this reversal of fortune a dispute about "what is to count as knowledge" in which the fundamental criteria for knowledge are arguable.

External perceptions have changed to reflect this change. Fewer students now feel confident of their subsequent careers when armed with a degree in a pure knowledge area: employers too are reluctant to recruit graduates without relevant practical experience. For many of these stakeholders, knowledge needs to be contextualised into appropriate professional, industrial and community settings, because its principal value is in its applicability. Some - for example, Usher, Bryant and Johnston (1997) - see this as a move away from "privileging theory"; others may see it as privileging practice.

However, there lies a danger in an over-extensive reliance on the knowledge generated by the academic communities of practice and a corresponding dismissal of that stemming from the pure disciplines. By its very nature, practice-oriented knowledge draws its strength from its ability to develop protocols and procedures. But although it provides the "know-how" necessary for professional tasks, and offers guidance designed to improve performance, it is weak in articulating the relevant "know-why" on which such guidance is founded. In consequence, it is unable to provide a base from which to explore the underlying structure of ideas, to make significant connections, or to generate innovative developments. If practically-oriented knowledge is not to prove sterile in the long term, it needs to have recourse to the contributions of pure academic disciplines, a need already identified by some

observers (see, for example, McInnis, 2002). Disciplinary groups can also be of value in offering related communities of practice a strong source of intellectual legitimation.

As noted above, the relationship tends to be a promiscuous one, with any given applied knowledge area drawing for enlightenment on more than one pure disciplinary base. Arguably, taken as a whole, practice needs to be enhanced by theory and practice-oriented knowledge by the products of pure academic enquiry. This gives rise to a symbiotic relationship in which professional groupings need academic knowledge while disciplines need the subsidies such groupings can provide, a notion not inconsistent with Barnett's (1997) three forms of critical being: critical reason, critical self-reflection and critical action.

A related but different interconnection between disciplines and academic communities of practice involves the recruitment into the latter of individuals with the relevant skills in an established disciplinary area, so ensuring the direct availability of the required intellectual expertise. While this arrangement is appropriate for pragmatic purposes in exploiting academic knowledge, it does not in itself secure the legitimation offered by the links with disciplinary groups noted above. It does however provide a new source of vitality for such groups, significantly widening their scope. Academic knowledge is no longer the sole prerogative of the scholarly profession, concentrated in universities: it has now become the domain of industry, the professions and elements of the community at large. From the point of view of the disciplines themselves, this strategy of survival by dispersion offers a useful counterpart to that of survival by concentration in the elite institutions which occupy the pinnacles of scholarly prestige.

The claim to elite status of certain universities is underpinned mainly by the high standing of their pure academic components, but the more entrepreneurial among them have also seized the opportunity to achieve excellence in applied fields. Their strong reputations enable them to raise substantial funds from commerce and industry, and to use the resulting wealth to preserve and enhance their academic core (Clark, 1998). As Marginson and Considine (2000:193) remark, "their academic cultures are more robust than elsewhere …[They] reproduce themselves despite reductions in public funding and despite managerialism". They are accordingly able to select highly capable and academically motivated students and staff to work in pure academic fields of enquiry, so maintaining the related standards of intellectual excellence.

This source of life support is reinforced by the historical legacy accumulated by the pure disciplines in their heyday. When the going was favourable, many departments in the arts, pure science and social science were able to build up key resources to stand them in good stead in leaner times. Some of these – printed materials, apparatus and the like – have inevitably become dated as the subject areas in question

have developed and changed: but others have remained stable, helping the departments concerned to maintain an adequate, if limited, existence. Collective resources are no less important. Journals and other publications keep open the traffic in ideas, enabling academic departments to stay in touch with ongoing developments. All established disciplines also have a range of associations which defend their interests in general and their standing and reputations in particular. Most of these associations also provide a kind of club to bring together the related individuals and groups and to offer them a source of mutual support which is not based on the interactions of communities of practice.

Taken together, these considerations suggest that the traditional disciplines will continue to survive, even if only as unacknowledged partners to academic communities of practice. As the foregoing discussion has implied, one of the factors in their relative downgrading has been the strongly utilitarian and money-obsessed current ethos (Griffin, 1997). For them to resume a significant place in the fabric of higher education would accordingly call for a significant change in the contemporary *zeitgeist*. Given the roller-coaster pattern of social values, in which one set of principles and practices is succeeded by its polar opposites, such a change - embodying a greater appreciation of the intellectual heritage of the academic disciplines - is clearly not impossible to contemplate.

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