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**Journal of the Programme
on Institutional Management
in Higher Education**

**Higher Education
Management and Policy**



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Higher Education Management and Policy

Volume 15, No. 3



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Internal Versus External Labour Markets

by

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Using the now classic distinction drawn by P.B. Doeringer and M.J. Piore between internal and external labour markets, this article endeavours to characterise university labour markets and recent developments affecting them in three countries, namely France, Germany and the United States. It is based on a qualitative empirical survey covering all three countries and a total of 21 universities. We can thus identify and compare various ways of fostering commitment, loyalty and motivation among academic staff in each case. We show that the selection tools specific to external markets vary from one country to another ("recruitment pools" versus "up or out") and use different modes of regulation. We also show that the equilibrium between internal and external markets in each country is, like the instruments used, closely linked to the conceptions prevailing within the academic profession. Consequently, the recognition system cannot be changed merely by changing the rules, since standards and relations within the profession will also be affected.

It is not the purpose of this article to present original, innovative experiments that are transposable across countries or adaptable to more than one educational facility. Nor does it assess different features of a system and discuss their comparative advantages in order to draw up recommendations. Its more modest aim is to view university labour markets from several angles to identify their salient features and describe how they are regulated. It focuses on two types of feature, namely the selection/evaluation procedures that punctuate and regulate academic careers, and the incentive mechanisms (e.g. performance-related pay, promotion on merit) that underpin or complement those procedures.

Part one describes the components of university labour-market dynamics in three countries, and draws essentially upon notions borrowed from labour-market economists. Part two will seek to demonstrate that the specific forms these features take are inextricably linked to the conceptions that characterise the academic profession in each country. The article concludes with a rapid review of current developments and endeavours to highlight their possible short-term implications.

The article draws on a series of qualitative, interview-based¹ surveys I conducted on the recruitment of historians and mathematicians in Germany, the United States and France,² which called for a closer look at the salient features of the university labour markets involved in these recruitment decisions. While qualitative surveys provide detailed insight into practices and the rationales behind them, they are unwieldy and the object of the survey must be carefully identified to ensure the comparability of the information and opinions thus gathered (in three countries and two subject areas in this particular case). The findings and conclusions set out below are therefore confined to the higher education facilities known as research universities in the United States and universities in Europe, rather than the higher education system as a whole. Furthermore, our surveys were confined solely to careers that lead (or may lead) to university professorships. In France, the focus was therefore on professors and *maîtres de conférences* (equivalent to senior lecturers or assistant professors) but not on PRAG (*professeurs agrégés*), PRCE (*professeurs certifiés*)³ or *chargés de cours* (junior lecturers),⁴ and very little on ATER⁵ or PhD students. In Germany, we looked mainly at the careers of *Professoren* but not at the many categories of *wissenschaftliche Mitarbeiter*,⁶ only some of whom will eventually write their *Habilitation* and become professors (I

shall return to the recent reforms in Germany later: as they are not yet implemented and their real impact will take several years to assess, the description of the German model in Part one refers to the system in place when the survey was conducted). In the United States we saw how assistant, associate and full professors are recruited, but not part-time or adjunct⁷ faculty members. While we shall be allowing for the fact that these other job markets exist, and more specifically their role in relation to “classic” academic careers, we shall not be looking at their internal modes of regulation.

One final point is important here. Whereas the French and German rules are national or federal in nature and enable us to refer to the “German model” or the “French model”, the lack of unified practices in the United States precludes hasty generalisations, even if they are confined to research universities. For brevity’s sake I shall often refer to “the United States” rather than specifying “the American universities in our survey”, but it would be wrong to assume that the patterns and similarities observed in these universities are to be found in all US research universities.

University labour markets: dynamics and incentives

Numerous studies (more recently Altbach, 2000; Enders, 2000 and 2001) have shown that universities differ across countries in terms of salary or status, for instance, that the proportion of staff with and without tenure is highly variable, that each country defines its own entry requirements for the profession, and that the various stages of a career do not obey the same rules. We shall not be returning to these points and must emphasize with regard to national disparities that they also translate into labour markets with differing dynamics. We shall accordingly describe the position of each of the three countries in terms of:

- The principles behind the career-access selection process.
- The average time required to obtain a virtually permanent post (be it titularisation, open-ended contracts or protected status such as tenure).
- Internal and external markets as a share of university labour markets.

In all three cases, there are substantial disparities between the three countries in the study.

Recruitment pools and “up or out”: Two approaches to selection with differing implications

Before looking at disparities, we should point out that careers in all three countries begin with a recruitment pool, that of doctoral students and qualified PhDs, who always markedly outnumber the posts available in higher education (universities and other facilities), so that only some of the candidates will obtain teaching or research posts.⁸ In all three countries too,

the initial stage in the process is a competitive selection procedure⁹ (although organisational arrangements may differ substantially¹⁰) for those seeking their first academic post. Competitive procedures are situations in which several candidates compete for vacant posts and the “best”¹¹ is/are selected, depending on the number of posts vacant.

For those who do not pass this first hurdle and cannot (or will not) turn to non-academic work, there are other market segments in each country’s higher education system which are either alternative institutional sectors (e.g. higher education facilities other than research universities in the United States, some of the *grandes écoles* in France, and the *Fachhochschulen* in Germany), or temporary solutions which are usually limited over time and may not offer career opportunities: they accordingly carry a large element of uncertainty (French examples include temporary ATER posts, while in Germany they may be post-doctoral courses abroad, and in the United States part-time or adjunct posts).

Leaving aside (for the time being) the case of France, where appointment to a permanent post is possible directly after completing a thesis, the remainder of the selection process after the first hurdle differs considerably in Germany and the United States. In Germany, it involves recruitment pools and successive competitive procedures, with the possibility (or in many cases the obligation), at each stage in the process, of abandoning the academic profession or turning to an alternative academic career.¹² After completing their first fixed-term contract, for instance, young academics will have to find or be offered another contract (usually in a different university, as required by legislation) or a post-doctoral course abroad, before having any hope of obtaining one of the few (and again temporary) posts with a lighter workload enabling them to complete a *Habilitation*, which until recently was a prerequisite for anyone seeking a professorship.

In the United States, the selection mechanism is quite different in that, once out of the recruitment pool, young academics who have obtained a tenure track post are no longer subject to competitive selection but become part of the “up or out” system: at several points in their career, members of their department will decide not to renew their contract or keep them on by promoting them. Candidates can be said to be competing against themselves, as it were, since it is no longer a question of being the best of a group but rather of being deemed capable (or not) of moving on to the next stage. The rationale whereby one is the best of a group meeting a basic standard of requirements¹³ gives way to the need to meet what are often very high expectations. The recruitment pool of competing candidates is replaced by individuals who must demonstrate their skills.¹⁴ If they succeed (as they do on average in 70% of cases across all types of higher-education facility¹⁵), they are guaranteed access to a permanent post or tenure.

In both types of procedure, the selection phase is characterised by heavy pressure on those aspiring to careers for life. Yet their career will not unfold in the same way in the recruitment-pool system as it will in an “up or out” environment.

Recruitment pools are far more uncertain as the process is opaque in three ways. The chances of being recruited depend on the number and type of posts available when the candidate is “ready” for either another temporary position or a permanent post; the number and standard of other candidates taking part in the selection procedure at the time; and the criteria chosen by recruiting departments. Compounding the opacity and uncertainty is the fact that recruitment-pool candidates are always viewed as “fledglings” under the wing of confirmed academics: French and US PhD students, and German *wissenschaftliche Mitarbeiter* (some of whom may be nearing the age of 40), are treated as learners without the freedom to define their subject areas, for instance, or their research methods.

In “up or out” situations, on the other hand, there is evidence of greater transparency: tenure is available, there are no competing candidates and the department/university’s own criteria are clearer since the application for tenure is examined in the candidate’s own department/university. Furthermore, the attitude to candidates is very different. They are considered to be fully fledged members of the department: while they must prove that they can fulfil the expectations placed in them, they can only do so by demonstrating their ability to think and work on their own.¹⁶

The incentive models underpinning these two types of selection are therefore not the same. Put very simply, recruitment pools place more emphasis on compliance and the academic “establishment”. They also leave more to chance and presuppose a certain psychological but also financial ability to cope with uncertainty and a lack of clarity regarding career prospects.

Late or early access to tenure

A second decisive factor in the dynamics of an academic career concerns the age of access to tenure:¹⁷ very young in France (on average around 32), it is around 35-37 in the United States but 42 in Germany. In some countries, the “trial period” is much longer than in others. Obviously this has an impact on the degree of uncertainty facing recruiters to a permanent post: the longer the pre-tenure period, the more supporting evidence there will be to document the application, after several years of employment. But there are two further implications: pre-tenure and tenure periods in a career, although interdependent, are very different.

They differ mainly because they involve radical change in the rules of the game. To stay in the race for tenure, it is vital to face a continual series of tests (e.g. publishing research, or applying for posts). In short, it is impossible to elude the “market”. But once tenure has been granted, testing one’s chances on the market becomes optional. Even if the internal market rules in individual universities may impose greater or lesser penalties on opportunist behaviour, as we shall see below, they never recreate the constraints of a pre-tenure situation.

In spite of these differences, it is important to grasp how interdependent the periods of pre-tenure and tenure are. First, there is the initial pre-tenure period in which duration plays a role: it can be assumed, for instance, that the longer the period of pre-tenure, the more the candidate will have developed a network of relations, obligations and co-operation that will make it harder and more costly to give up, since this would mean abandoning a reputation that has taken time to build. Conversely, a period of pre-tenure that is too long and uncertain may also have undesirable effects, and it is these that have largely prompted the current reform in Germany; they include brain drain to other countries or non-academic careers, and reduced creative potential owing to reliance on the academic “establishment” in authority. Second, pre-tenure staff have expectations of the advantages that tenure will bring. For instance, once tenure is granted, they may make younger members of staff go through the same pre-tenure experiences they themselves accepted (or endured) with the prospect advantages to come, including the opportunity of forming their own team of assistants (Germany).

The relationship between pre-tenure and tenure thus affects career development, but also relations between staff with differing status and the expectations specific to the various stages of an academic career.

Internal versus external markets

A third factor differentiates the three countries. It concerns the relationship between internal and external labour markets and the rules governing internal markets. Here we refer to the distinction drawn by P.B. Doeringer and M.J. Piore, in their now classic work dating back to 1971. They see an internal labour market as “an administrative unit, such as a manufacturing plant, within which the pricing and allocation of labour is governed by a set of administrative rules and procedures” as distinct from an “external labour market of conventional economic theory where pricing, allocating, and training decisions are controlled directly by economic variables” (Doeringer and Piore, 1971, pp. 1 and 2).

We shall therefore refer to internal markets when an academic career is confined to a single university and obeys the rules and incentive mechanisms defined and/or implemented within that university. Conversely we shall refer

to external markets¹⁸ when professional advancement involves the need (or regulatory obligation) to apply for posts in universities other than the current place of work, and when it is vital to pass such tests in order to gain promotion, pay increases and access to better working conditions.

A distinctive feature of career management **in Germany**, until the recent reforms, has been its regulation by an exclusively external labour market¹⁹ once the status of *Professor* is achieved, there are virtually no opportunities for advancement in the same university, and no internal incentive mechanisms within universities. Everything depends on negotiations at the time of recruitment from the external market, which will determine the level of salary and the resources to be made available to the recruit. Only if that person is successful in another university's recruitment procedure can the terms of a contract be renegotiated. Academics who do not venture into the market again will remain on the terms negotiated at the time of recruitment. If they make poor use of the resources they have been granted, or take an opportunist attitude (little contribution to teaching, withdrawal from research, etc.), the only recourse is social constraint and some friendly pressure from peers and university officers. However, to obtain a professorship, followed by promotion (to the equivalent of full professor) and the chance of finishing one's career in a renowned department, there is no other way but to move back into the external labour market.

In France the principle of institutional equality that should, in theory, prevail and the fact that the salaries of "teacher/researchers" are set in line with bureaucratic rules creates a *de facto* "French internal market", i.e. the French university system and its facilities across the country. But the situation is not that simple. For one thing, universities are not as equal as they appear, although they are not ranked in widely published league tables as they are in the United Kingdom or the United States. Teaching staff can still mentally rank the other departments specialising in their discipline. As in other countries, too, wages are not the only components of the reward system, others being the university's reputation, as well as forms of symbolic recognition (access to the media, membership of expert committees) and scientific recognition, when a team is awarded quality certification (and hence funding and sometimes posts) by national research institutions such as the CNRS, INSERM or INRA. Yet in France these forms of reward largely elude the control of the university employing the member of staff concerned. So differentiation between French universities stem less from the academic labour market than from other, parallel factors, and does not translate into substantial pay differentials between the beginning and end of an academic career, or between disciplines.

The fact that French academic labour markets play a very minor differentiating role goes hand in hand with the virtual absence of any

institutional incentive mechanisms. In theory young *maîtres de conférences* may decide to confine themselves to automatic pay rises based on seniority²⁰ and fulfil no more than their statutory teaching duties.²¹ Applying for the *habilitation* and a professorship is a strictly personal decision that might be prompted by factors such as the atmosphere at work, encouragement from a team leader to seek promotion, the number of posts falling vacant, or personal attributes.²² In arts and sciences, *maîtres de conférences* are not discouraged from seeking internal promotion to professorships: few departments make it a policy not to recruit internally or are known to recruit internally only on very rare occasions. There is even evidence in our surveys that “internal promotion” is sometimes a way of acknowledging local engagement or community involvement by teaching staff who may perform credibly when it comes to research²³ but would have little chance of a professorship in universities other than their own. Consequently, only teaching staff willing (or able) to advance their careers apply for posts externally, usually in departments of some renown.

The situation is somewhat different in subjects for which there is a higher *agrégation* (e.g. law, economics, management or political science). A professorship will still be the outcome of a personal career strategy but will nearly always involve institutional mobility: candidates who pass their *agrégation* choose the universities they wish to go to by their rank order in the competitive examination. Once in the post, young professors may, again if they so wish, apply for vacancies elsewhere as a way of moving to another university and possibly a more prestigious department.

So in France, venturing into the external market is often a necessary career move, but there are other equally effective ways of gaining recognition. It is also an optional move, and those who decide against it do not have to contend with highly regulated internal markets and constraining incentive mechanisms in their own universities. By and large, universities have little leverage.

The **United States** have a combination of internal markets with fairly well-developed incentive mechanisms and a keenly competitive external market. This is because universities have established internal markets. They seek to retain their best teaching staff with working conditions and wages that “reward” the best, in other words they programme annual wage increases, and take case-by-case decisions on timetable arrangements, sabbatical leave – or fast-track promotion.²⁴ Internal markets also seek to prevent under-performance by rewarding the efforts of teaching staff but also penalising poorer performers with flat salaries, heavier timetables, and so on. While we should not be under too great an illusion as to the incentive capacity of these mechanisms,²⁵ they nevertheless impose some basic standards, regular evaluation and monitoring.

They also introduce substantial differentials between teaching staff in the same department.

In addition to these internal markets within each university is an external market that remains optional (there are no mechanisms to force teaching staff to venture into it) but is also the only way for staff to see their “value” substantially increased by their “market price” rather than by their own university’s in-house rules on pay. However, the only staff to venture into that external market are those who feel they have a chance of succeeding, i.e. those who think they will be recruited by a university that is more prestigious or pays more, and/or that their own university will make a counter-offer.²⁶ Within the research universities, there are thus two different career strategies: one is to enter the university’s internal labour market, while the other is to venture occasionally into the external market.

Career dynamics reflecting national disparities in the development of academic professions

Part one of this article showed that the disparities in wages, grades, status, working conditions, etc., revealed in any comparative publication on the academic profession go hand in hand with labour markets whose internal dynamics vary markedly across countries. Responses to the same question in each of the three countries, for instance, proved to be fundamentally different.²⁷ Yet this appears to be closely linked to the way in which the academic profession has emerged and developed in each of the countries in the study.²⁸

The only way of testing this hypothesis properly would be to reconstruct how each of the three markets described gradually came about, but a rapid overview of the three countries and their higher education systems can already provide a considerable amount of supporting evidence.

In France, for instance, the academic system developed around individual disciplines, relegating the actual universities to the sidelines until the 1968 Act and, more importantly, the contractual policy introduced in 1989 (Musselin, 2001). Since Napoleon, the profession has been run by central government (i.e. governed by rules issued by the Ministry which shares the burden of management with the representatives of university officers, and placed under the supervision of a national body) and is structured by key subject area. The principle of undifferentiated pay for equal status²⁹ soon prevailed: there had been attempts to personalise and differentiate pay during major reforms in the late 19th century, but these eventually came to nothing (see Charle, 1994, pp. 75-80). It was on the basis of this uniform system, with its relatively undifferentiated pay and internal regulation by key departments, that the French academic profession developed, particularly since the

universities themselves lacked the authority to create a counterbalancing force in the form of internal markets.

In the United States the situation was quite the opposite. Higher education facilities were the foundations of the higher education system (Touraine, 1972; Clark, 1987), allowing very different internal markets to emerge from the outset. It was only with the advent of “research universities” in the late 19th century that the best candidates began to use institutional mobility to further their careers. And in this country, the profession was never based on a single status and identical pay scales, but on the acknowledgement of personal autonomy, symbolised by academic freedom and guaranteed by tenure.³⁰

In Germany, the university education system that had developed since the reforms at the turn of the 19th century was, as in France, a unified system with very little differentiation between the universities. Yet in spite of the staff’s public-servant status, there has always been more differentiation where careers are concerned. So here too, there have long been marked disparities (in terms of status, prestige, autonomy and remuneration) between professors and those aspiring to the career (as noted by J. Enders, 2001) but also greater degrees of differentiation than in France between the professors themselves.

Consequently, the various labour markets described in Part one closely reflect historical developments in the profession in each country. Those developments certainly account for the disparities, revealed by international surveys such as the Carnegie Foundation portraits (Altbach, 1996), in practices among academics, how they organise their working time, their sense of belonging to their university or discipline, their levels of satisfaction and so on, but all of these factors are merely the visible aspects of the perceptions, identities and ideas around which the academic profession has developed in each country. While we lack the solid support of comparative empirical evidence on this point, it is safe to assume that French academics do not have the same tolerance towards pay differentials, the same sensitivity to the principle of equality or the same relation to their work, for instance, as German or US academics. Specific labour-market patterns in each of the three countries reflect (and underpin) the structure of the profession in each country.

Conclusions: some comments on current developments

As suggested in Part one and two, the rules governing university labour markets are inextricably linked to the way in which the academic profession regulated by that market has gradually developed. Consequently, changing the rules also means simultaneously redefining relations to work, for instance,

and relations within occupational groups. And change is in fact on the agenda or about to be introduced in all three countries in our study.

In Germany, after protracted discussions, reform has been adopted at federal level and is currently being implemented in each of the *Länder*. It involves two major changes. The first is to create junior professorships, open to candidates directly after the doctorate for a period of three years, renewable once, after which they may apply for a professorship with tenure.³¹ This reform is generating change in the selection process (successive recruitment pools are giving way to the “up or out” system). Second, the introduction of a performance-related pay component in the salaries of newly recruited professors will be an opportunity for universities to introduce internal incentive mechanisms.

In the United States, the debate has resumed on the appropriateness of tenure, but also on the introduction of regular reviews of tenure, and there is growing recourse to adjunct and part-time posts. These changes are not affecting research universities as much as the other types of facility, but they tend to widen the gap between teaching staff kept out of the internal markets and those who, on the contrary, will enter these markets but be subject to tighter rules on evaluation and control.

In France, some measures over the past ten years have given universities more leeway on their internal markets: they take half of all promotion decisions, allocate teaching bonuses, are being urged to introduce teaching evaluation systems, and in some cases are beginning to manage their own recruitment budgets. Furthermore, two recent reports have put forward proposals for more diversified staff management (Fréville Report, 2001, and Espéret Report, 2001).

Although extremely diverse in content, these developments all step up regulation by the internal market and provide universities with new tools of evaluation, promotion and recognition. They will all eventually increase differentiation within the profession and are based on empowering universities, i.e. allowing them to set up and implement more regulated internal markets.

Given the points made above about academic professions based on different conceptions, it is in France that this leads to the greatest change and it is there that change may encounter the most resistance, because the academic profession has developed on the principle of equality (or very little differentiation) but also because the change does not involve externalising recognition mechanisms (in particular to research bodies) as was previously the case, but internalising them (within the universities). Finally, French universities now have more assertive governing boards than in the past, but this development is only recent and fragile, and there is no certainty that they

have sufficient legitimacy to play the role expected of them in the recommendations of the Fréville and Espéret reports.

A similar but more moderate conclusion can also be drawn regarding developments in Germany. While the idea of performance-related pay and internal differentiation is not directly in contradiction with the German academic model, the crux of the issue will be how to define and introduce quality criteria. More important, however, is how the introduction of junior professorships will affect the identity of German professors, or their relations with colleagues who will no longer be “their” assistants.

Finally, in the United States the issue is not so much the impact of a shift to stronger internal markets as the emergence of a two-speed profession.

In all three countries, the expected changes will clearly go beyond “merely” altering the rules: in every case they will change the way the academic profession has been defined and developed, and it is precisely this interaction between university labour markets and academic systems that requires further insight and explanation.

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Notes

1. Interviews were conducted with recruitment board members, departmental heads and heads of education/research units in five history and five mathematics departments in France, four history and four mathematics departments in Germany and two history and two mathematics departments in renowned research universities in the United States. In each department, 10 to 15 interviews were conducted.
2. For an initial summary of findings on recruitment boards, see Musselin (2002).
3. PRAG are secondary teachers with the *agrégation du secondaire* diploma while PRCE are secondary teachers with the CAPES diploma, but both teach in higher education, with a workload double that of university staff. They have access to an academic career and status if they pass their thesis and, like any other PhD, take the recruitment examination for *maîtres de conférences* (first academic post in the French university system). If the demand for staff in higher education declines, they can be asked to return to secondary education.
4. These spend a number of hours teaching in higher education from time to time when there is a lack of permanent staff.

5. Temporary contracts, usually renewable only once, mainly for PhDs who are completing or have just completed their doctoral studies. The workload is equivalent to that of a “teacher/researcher”.
6. A generic term covering all posts (usually fixed-term and renewable only once), whether or not they involve teaching as well as research.
7. Staff recruited on a fixed-term contract to a full-time post with no prospect of applying for tenure, and with heavier workloads than on the tenure track.
8. In France, for instance, there were some 3 200 posts vacant as *maître de conférences*, whereas some 9 576 PhDs qualified that year.
9. Economists call these mechanisms “rank-order tournaments”. Rather than selecting on the basis of results, they compare candidates and rank them according to performance, as suggested by E.P. Lazear and S. Rozen (1981) in situations where output is not easy to measure and effort is hard or costly to monitor.
10. In some cases, the competitive procedure may be national and organised by the government authorities with the same arrangements and procedures for everyone (as in France); in others it may be organised in a relatively spontaneous way, with universities advertising vacant posts and considering the applications they receive (as in the United States); or it may be far more restricted and local as when a German professor offers one of his/her PhDs (on a fairly discretionary basis) the chance to continue after the doctorate with a fixed-term post as part of a research contract (possibly with some teaching duties).
11. Quotation marks are used here to suggest that competitive procedures are inefficient and fail to select the best, but to remind readers that what is meant by the “best” candidate may vary considerably, depending on which department organises the recruitment, even in a relatively homogeneous sector like the research universities. For a discussion on this point and a presentation of the empirical data supporting this statement, see my article on the subject (Musselin, 2002).
12. Unfortunately no figures are available here.
13. For instance the *Habilitation* in Germany, or the doctorate plus the *habilitation à diriger des recherches* in France.
14. “Up or out” is defined as follows by O’Flaherty and A. Siow (1992): “Consider a production unit within the firm as consisting of two workers, one junior and one senior. (...) Each worker has one of two skill levels: able or unable. We assume that the unit is able to produce output only if its senior worker is able. (...) Initially, the type of any junior worker is *unknown* (our emphasis) to both the worker and the firm. As production occurs over time, the senior worker observes the ability of the junior worker with more and more precision (...) and has to choose one of three decisions: retain the junior, fire him, promote him.” See also O’Flaherty and Siow 1995.
15. According to R. Chait (2002:25), “in the early 1970s the odds of gaining tenure were a little better than 7 in 10 (Commission on Academic Tenure, 1973) and remained so in 1992-1993, when the probability rate was last calculated (National Center for Education Statistics, 1993)”.
16. The US university departments in our survey sought to recruit young assistant professors working on subjects not covered by any other members of the teaching staff: they were clearly not recruiting assistants for other members of staff, but people who would develop their own subject areas.

17. For a fuller presentation of this argument, see Musselin (2000).
18. We shall be not sticking very closely to the Piore/Doeringer definition because, as shown in previous work, adjustment between supply and demand on university labour markets is never via price but via quality (Musselin, 1996). These markets, even when they are not regulated by administrative rules, therefore defy classic economic theory. However, it is quite interesting to draw the distinction between career processes obeying university-specific rules and those involving institutional mobility and a return to the labour market.
19. Change in the “prices” offered to professors relates less to pay (predefined in administrative salary scales that leave little scope for negotiation) than to working conditions, e.g. number of assistants, facilities, and budgets for books and computing equipment.
20. These automatic increases are not very substantial and come to an end once the highest step in the grade has been reached.
21. The same for *maîtres de conférences* and professors, i.e. the equivalent of 128 hours of lecturing per year (or 192 hours of tutorials).
22. This covers not only personal ambition but self-evaluation.
23. In any case that person must have obtained an *habilitation* and be recognised as qualified by the relevant CNU (national council of universities) section, whose decision will be largely based on the candidate’s scientific profile.
24. But “prices” on this internal market are still lower than those obtainable on the external market. In other words, a confirmed professor recruited by a university will obtain a higher salary than the best teaching staff working there (Siow, 1995).
25. Many of the teaching staff interviewed felt that these wage increases were too small to act as incentives.
26. This counter-offer is important in two respects. First, the very mention of it enables staff to raise the stakes and obtain more from a university willing to “poach” the candidate. Second, some teaching staff only go into the external labour market so as to obtain a considerable pay increase from their employer at the mention of the offer from another university. They may be unpleasantly surprised to find that their own university is quite willing to let them go.
27. In a fascinating report on the development of railway companies in the United States, France and Britain, F. Dobbin (1994) also found radical differences in the way these countries approached the same issue. Refuting economic theories which state that “exogenous, universal, economic laws govern the cosmos and produce social practices” (1992:7), he argues that different models can develop as each country has its own policy culture that will influence, for instance, the way problems are perceived and solutions are developed.
28. It would certainly be possible to broaden the discussion and show that these “national” systems and their translation into specific university labour markets are part of broader societal dimensions (Maurice et al., 1982).
29. Although a distinction was made until 1963 between Paris and the provinces.
30. It is no coincidence that tenure is granted by the great majority of research universities and less systematic in higher education facilities where the focus is on teaching.
31. The *Habilitation* is therefore no longer a pre-requisite for professorships.

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An Integrated Approach to Academic Reinforcement Systems

by

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Over the last few years, university professors' careers have undergone a change approaching a true revolution: a major diversification in career models, from fundamental research to professional innovation to knowledge transfer; increased use of computerised tools and the Internet in both teaching and research; the all but mandatory requirement to form research teams and networks, often multidisciplinary in nature; the growth in partnerships with industry for both training and research; and ever more complex and demanding regulations governing intellectual property. We also see more competition, often ferocious, among universities and between academe and private companies to attract the most promising candidates. In this context, it has become more vital than ever before for universities to put in place reinforcement systems that are both fair and capable of motivating excellence and of attracting and retaining the best people.

In past decades, the traditional reinforcers were the merit pay system and tenure, not counting other incentives used on a random and situational basis, generally in the absence of well-established rules. The current context demands a richer, more complex, more transparent and more diversified reinforcement system that will integrate a set of incentives that are more closely tied to current academic needs and faculty members' quality of life. This article, which is based on the experiences and thought process of the Faculty of Arts and Sciences at Université de Montréal and on the orientations of a number of North American universities, illustrates an integrated approach to academic reinforcement systems, from hiring to retirement, and a merit pay model adapted to the university of the 21st century. The need to review promotion criteria and standards is particularly emphasised.

Changes in the requirements of the academic career

Reading the collective agreements of many North American universities, one might be tempted to claim that the parameters of a professor's career have not really changed. We still find teaching and research to be the main elements, along with two components considered by most people to be relatively minor: contributing to the administration of the institution and community service. These major categories do not properly reflect or do justice to the increasing number and complexity of the tasks that they cover, nor do they adequately reflect the changes in institutional mission statements which, in some universities, have drastically changed the composition and relative importance of these categories.

A recent study on innovative universities in Quebec and across Canada (Mathieu and Doray, 2002) has enabled us to identify the main expectations and requirements of various external actors (advisory councils, government departments, research funding organisations) towards the universities in terms of both teaching and research. No matter who the stakeholders may be, the key words remain the same: new technologies, interdisciplinarity, partnerships with industry and relevant cultural and social organisations, interinstitutional collaboration, as well as, in the case of research, the need for an ever-expanding structure (teams, groups, centres, and provincial, national and international networks), which often involves a large number of researchers over time. There is also the issue – reflecting a praiseworthy and relevant desire for increased social involvement – of the need to transfer social and technological innovations resulting from university research.

An analysis (Mathieu and Doray, 2002) of the 25 main policy papers produced during the last five years for the government of Quebec alone by bodies outside the universities (reports from the Superior Council on Education, many studies and recommendations from the Science and Technology Council, the Quebec Policy on Universities, the Quebec Policy on Science and Innovation) reveals remarkable convergence in their expectations, criticisms, and even prescriptions for the innovative university. Box 1 provides a brief summary.

The analysis of Quebec and Canadian research funding agencies' strategic plans and funding requirements leads to the same conclusions concerning the key position of structured research and the increase in funding dedicated to research partnerships and knowledge transfers.

Box 1. **Characteristics of the Innovative university**

New information technologies, distance learning, life long learning.

Increase in number of new faculty hired in strategic sectors.

Choice of strategic research themes.

Inter disciplinarity.

Inter institutional collaboration.

Increased structuring and scope of research activities: teams, centres, networks.

Partnerships with business and other relevant organisations.

Increased prestige of research and of liaison and transfer of social and technological innovation.

Outreach, engagement in the community.

Analysis of the European Parliament's decision concerning the European Community's Sixth Framework Programme for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002-2006) clearly demonstrates that these expanded expectations also apply to European universities. With regard to research and innovation, it states that "These activities are intended to stimulate technological innovation, utilisation of research results, transfer of knowledge and technologies and the setting up of technology businesses in the Community and all its regions, not least in the less developed regions. Innovation is also one of the most important elements throughout this Programme". Another strategic objective is the development of infrastructure and ensuring that facilities in the various member states complement each other. Finally, let us point out the increased importance attributed to relationships between science and society: "Activities to encourage harmonious relations between science and society and the awareness of society in respect of innovation, as a result of new relations and informed dialogue between researchers, industrialists, political decision-makers and citizens."

This expansion of the university's mission and the consequent increase in the scope and complexity of professors' tasks is also to be seen in US universities. In illustration of this point, we quote some extracts from mission statements of the major universities in the Southern United States, cited in Tornatzky, Waugaman and Gray (2002), which clearly demonstrate the role of the universities (and of professor-researchers) in the knowledge economy.

- "Through the active integration of teaching, research and extension, North Carolina State University creates an innovative learning environment that

stresses mastery of fundamentals, intellectual discipline, creativity, problem solving, and responsibility. North Carolina State University provides leadership for intellectual, cultural, social, economic, and technological development within the state, the nation, and the world. [...] to develop partnerships in basic research, education, commercialisation and public outreach with individuals and organisations dedicated to the advancement of science, engineering and technology as a force in improving the economic and social well-being of the nation and the world.” (North Carolina State University)

- “In the Information Age Economy, where success is rooted in the strategic application of technology and knowledge management, the lines between business and academia are being blurred by partnerships that deliver value to a company’s bottom line, just as they advance a university’s academic and research missions. Ohio State’s Office for Technology Partnerships leads us to the best practice technology partnerships and supports the University’s mission toward top 10 public research institution status.” (Ohio State University)
- “I believe that we can and should be identified as the leading model of how a university simultaneously provides excellence in undergraduate education, graduate education, research, scholarship, and creative activity; technology transfer and promotion of economic development; continuing education; co-operative extension; public and professional service; the promotion of health and human development; and the cultural advancement of society.” (President of Penn State University)
- “Purdue’s research mission involves components of both basic and applied research. A cardinal feature of applied research is the utilisation of the results to solve a real-world problem of societal interest. It follows naturally that technology transfer activities are a companion to the applied research mission. The technology that is exported from the university has direct and indirect impact on the community, State and nation. Therefore, the research activities of the faculty have an important impact beyond the usual academic results.” (Purdue University)
- “The value of the interaction of theoretical knowledge and actual practice is translated into and embodied by the myriad of outreach activities of the university community.” (University of Wisconsin)
- “Through its focus on teaching and learning, research, and outreach, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.” (Virginia Polytechnic Institute and State University)

- “Our ability to attract and retain the best faculty, staff, and students is dependent on the educational, economic, cultural and social vitality of our regional community. We will use our strengths, in collaboration with other Pittsburgh institutions, to advance the educational, economic and cultural opportunities of the region and all its citizens.” (*Carnegie Mellon University*)

One last quotation from Virginia State University's promotion and tenure guide summarises the changes in missions and expectations:

- “Faculty members are expected by the university and the public to make their professional knowledge and skills broadly available to society. Outreach is one of the principal responsibilities of a land-grant university... Outreach must be grounded firmly in university programmes. It is an umbrella under which fall activities in continuing education, community and economic development, co-operative extension and other programmes that extend the knowledge and expertise of faculty for the direct benefit of society.”

It is already difficult to recruit sufficient numbers of high-quality young professors, and competition is fierce. How is one to attract, retain and continue to motivate the very highest-calibre candidates in such a demanding and complex environment?

An integrated reinforcement system adapted to career path

Before considering incentive and reinforcement systems, it would be appropriate to emphasise the absolute necessity of adapting these systems to the professorial career path. As we will see, it has become essential to pay particular attention to the recruitment and installation of new professors, whereas, scarcely 10 years ago, hiring negotiations centred almost exclusively on salary and teaching load. In the absence of the incentives formerly represented by promotions, and in a context of increased competition and mobility, the period following tenure demands a balanced system of support and recognition strategies. Finally, with the growing number of retirements and the difficulty of replacing these people, more attention must be paid to mechanisms to encourage retired professors to continue contributing to their institutions.

From recruitment to tenure

At the time of recruitment, it is now necessary to offer a coherent set of personal and professional conditions. Over the years, our institution – whose experience appears to be representative of many North American universities – has had to respond to a growing number of increasingly diverse demands and concerns; over time, we have come to develop a more organised and proactive approach, integrating an extended range of support and recognition strategies. Table 1 presents the main ones. Some are only used at the time of

Table 1. **Support and recognition strategies**

Personal conditions	Professional conditions
Salary scale and hiring premiums	Progressive, gradual teaching load (first years)
Help finding job for spouse	Equipment and laboratory space
Information on children's schools	Quality and number of colleagues in the discipline/subfield
Quality of environment (beauty, safety, etc.)	Quality of graduate students
Cosmopolitan culture of Montreal	Support with research grant applications
Possibility of bonuses for excellence	Sabbatical provided for in collective agreement
Exemption from tuition fees for spouse and children	Adjustments of teaching loads to needs and performance
Insurance and retirement conditions	Affirmative action programme for women
	Teaching excellence awards

hiring but most strategies related to the performance of duties continue throughout the career path and thus should constitute incentives at the time of hiring.

The experience of the last few years has highlighted the importance of presenting candidates with a complete set of personal and professional conditions, whereby the quality of some of them may offset others that are less competitive or even potentially aversive; the perception of the set varies greatly from one person to the next.

Other things being equal, we have noted that quality of facilities and equipment along with a tapered teaching load and a high-quality professional environment (well-known colleagues) often compensate for the fact that our salary scales are less than competitive with US scales (even given the offer of hiring premiums) and for the deterrent effect of Canadian taxation rates.

To sum up, in what one might well consider to be a sales presentation – or even a seduction! – the incentives must be presented convincingly and transparently, adapting the demonstration to each person's situation (Canadian citizens vs. foreigners, men vs. women, married vs. single, parents vs. childless persons). For example, the affirmative action programme for women at Université de Montréal is one of the most progressive in North America (four months' maternity leave with full pay, maternity leave considered in calculating years for promotion purposes, lighter teaching load until child's second birthday) and this may tip the balance in our favour.

After the person has started working for us, the renewal of their contract and the granting of tenure are the main incentives, both in financial terms and in terms of career advancement, and the support and recognition strategies listed in Table 1 should foster effective development.

One unknown, or rather uncertain and discomfiting, factor is that for the majority of universities the definition of the criteria for promotion is perceived as vague by many new faculty members, and even by many academic administrators, and has not kept pace with the changes in the mission and expectations. We will return to this point later.

From full professorship to retirement

In North American universities, the major incentive following tenure is promotion to the rank of full professor, which most faculty members achieve in their early 40s. A small number of them, whether by choice, bad luck or accident, are refused this promotion along with the related financial benefits and prestige.

Once a full professorship has been obtained, however, there are few internal incentives. Apart from sabbaticals, which are perceived more as a right than a privilege in the management of collective agreements, and lightened course loads to acknowledge excellence in research, the incentives tend to be external, such as awards and distinctions reserved for a small elite. Progress along the salary scale is the same for everyone and the ceiling is reached in the early 50s. In this context, as we have seen over the last 15 years, the most productive professors are likely to become frustrated and to request more and more excellence bonuses, which increasingly take on the nature of “preventive” retention tools; “reactive” retention bonuses may also be granted to colleagues who are being wooed by other institutions. And although bonuses may be beneficial in some cases, they can become toxic for the organisation as a whole and a headache for the managers who must strive to maintain equity without being able to base themselves transparently on a coherent and widely recognised system of rules for granting these premiums. In the following section, we will present a merit pay system that we believe can mitigate the absence of financial incentives related to service quality after full professorship and complement the set of conditions presented in Table 1, in particular changes in workload and sabbaticals.

First, though, some thoughts on retirement: In the last few years, the number of retirements has been increasing and this phenomenon will only increase with the departures of the professors recruited during the hiring boom of the early 1970s, some of whom are choosing to leave before the normal retirement age of 65. The difficulty of recruiting enough high-quality young professors now means that we must have recourse to incentives that will convince certain older professors to continue contributing to their institution after retirement: office and laboratory space, paid teaching, etc. When a retirement incentive programme was implemented in 1996 for professors aged 55 and over, we observed that some of them chose to retire while continuing to do their research and to supervise master’s and doctoral

candidates, while others volunteered to teach introductory courses at the undergraduate level free of charge. We should also note that the retired professors' association does play a strategic role in maintaining a feeling of belonging and getting its members involved in the university's fundraising campaigns. So retirement should not simply be seen as a departure and the end of a career for everyone. Universities will have to deploy a customised set of strategies and incentives to ensure that retirement for some people means a new phase in their career and in their relationship with the institution; for example, they could be very helpful as mentors to newly appointed professors.

A merit pay model

The model presented here was designed and fine-tuned in the Faculty of Arts and Sciences in 1991, based on the work of an advisory committee of professors co-chaired by the author. It was adopted at the Faculty and institutional level, but it has not yet been endorsed by the professors' union. Nevertheless, we present it here in the belief that it still represents (with certain amendments that we have integrated) a partial but effective solution to the problem of motivating professors after they have achieved full professorship and to the dilemma of maintaining equity in performance recognition. It is only a partial solution but it complements other incentives and forms of recognition such as lightened course loads, sabbaticals, teaching awards and various forms of support such as teaching assistants, etc.

Canadian and US merit pay models

An analysis of merit pay systems in certain Canadian and US universities and consultation of the relevant documentation on the subject allow one to tease out the main features of these models and the advantages and disadvantages to consider in potentially adapting them to the reality of today's university. The main sources of documentation on merit pay principles in the Canadian and US education systems are listed in the references.

First of all, two main models or systems should be distinguished. In what we will call model 1, both cost of living increases and "progression along the scale" depend on a positive merit evaluation; this is the one-way model. In model 2, or the mixed model, all professors receive a raise based on the cost of living and only progression along the scale is contingent on performance assessment.

A second characteristic is common to almost all the systems or experiences considered: the ranking of files along a quality continuum. Since each unit, department or faculty receives a predetermined amount of money or number of points, ranking must be done in order to decide on the cut-off score. In some universities, such as McGill or University of Toronto, this

ranking takes place in a still more finely calibrated (indeed complex) system, where 0, ½, 1, 1-½ or 2 points may be assigned.

A third characteristic, common to all universities, concerns evaluation. Evaluation itself is part of the logic inherent in the system: *to acknowledge performance quality, one must necessarily evaluate it*. The categories of evaluation criteria retained in all universities are the same as those for promotion to full professor (teaching quality, academic and scientific productivity, service). The degree of precision of these criteria and standards varies greatly from one university to another.

A fourth characteristic, also common to all institutions considered, is that evaluation takes place annually and affects all professors.

A fifth characteristic concerns evaluation mechanisms. In almost all cases, determining merit pay is separate from granting promotions. Furthermore, except in rare cases, the single person responsible for this operation is the department chair, who must nevertheless submit his or her decisions for approval by the Dean or Provost (who may or may not be advised by a committee).

In the following sections, we will justify the elements retained or adapted.

An adapted compensation formula

Guiding principles

In developing a merit pay formula, we wanted, on one hand, to avoid the hazards of the models we had studied and, on the other, to take account of the practices and culture of Université de Montréal, viewed as representative of a large number of North American universities.

Thus, we opted for the mixed formula, where only progression along the scale depends on a positive performance evaluation. This formula seemed closer to the institution's existing practices, as well as being more effective as a system of positive reinforcement.

We proposed an incentive pay formula only for full professors, because the promotions to associate and full professor already constitute incentives for assistant and associate professors, respectively. The implementation of a merit pay formula for full professors, together with appropriate evaluation mechanisms, should allow more fairness in recognising the performance of these professors and in dealing with the entire faculty.

We did not choose to rank files along a quality continuum, preferring a more "individual" formula for each full professor to recognise the maintenance of the performance standards required upon achieving full professorship. This formula, which must be based on clearly established quality standards and appropriate evaluation mechanisms, to avoid the pitfall

of laxity, also allows one to evade the organisational difficulties of ranking systems within the units. Any professor who maintains the performance quality required to achieve full professorship will advance along the scale. This is neither a new promotion system nor an obstacle course where the difficulties constantly increase. The proposed system also enables us to take reduced teaching loads into consideration. Inspired by the formulae used at other universities, we stipulated that the evaluation criteria for purposes of merit pay are the same ones used for promotion to full professorship.

Unlike the most common practice, we favour evaluations every five years rather than annually. This frequency seemed to us to be better adapted to our institution's practices and, more importantly, likely to further equitable evaluations that take average performance over time rather than short-term performance into consideration. We consider that the five-year cycle allows us to achieve the objectives of this evaluation process, which is intended to maintain performance quality while taking into account publication practices in different disciplines, career readjustments, changes in research topics, chance factors affecting sponsored research, etc. A positive evaluation moves the professor five steps along the scale until the next evaluation in five years.

Finally, in order to promote greater transparency in the evaluation process, we favour peer evaluation at both the Faculty and departmental levels. This process is better aligned with our practices than systems where the department head or the Dean is in sole charge of the operation. The equity and transparency of the evaluation process are ensured by making use of departmental and Faculty committees (whose recommendations are followed by those of the department chair and the Dean), on one hand, and by established criteria and standards reflecting the reality in the discipline and the field, on the other.

Table 2 summarizes the main characteristics of the merit pay model seen in most Canadian and US universities and those of the proposed model.

Table 2. Main characteristics of the most common merit pay model and of the proposed model

Most common merit pay model	The proposed model
Model 1: both cost of living and progression along the scale depend on positive evaluation.	Model 2 or mixed formula: only progression along the scale depends on positive evaluation
Model 2 or mixed formula: only progression along the scale depends on positive evaluation	
Ranking along a quality continuum	Individual maintenance of full professor quality
Same criteria for merit pay as for promotion	Same criteria for merit pay as for promotion
Evaluation takes place annually and affects all faculty members	Evaluation takes place every five years and affects only full professors
Evaluation done by department chair	Peer evaluation

Before closing this section on the guiding principles underlying a merit pay model that focuses on rewarding the maintenance of performance quality by full professors, we have two comments concerning associate professors and awards of excellence.

With regard to associate professors, it should be emphasised that this model does not call into question the institution's duty to recognise exceptional performance in one specific area by associate professors whose career path cannot lead to their obtaining full professor status. Establishing a merit pay formula does not in any way negate the possibility of awarding prizes to acknowledge exceptional contributions in specific professorial duties.

We believe that this model has many advantages that could serve as an inspiration even for universities that already have a merit pay system in place. However, it has two weaknesses. For one thing, it has not yet undergone experimental testing and, more importantly in our opinion, like most existing models, it does not set out precise criteria and standards, adapted to the current reality of university professors' jobs. On the other hand, it stresses the need to consider the specific characteristics of different disciplines and fields. In the last section of this paper, we will attempt to contribute to the search for a better match between expectations and recognition criteria, on one hand, and the changes in the various aspects of an academic career, on the other. In the previous sections, we saw the importance of achieving this objective if we are to support faculty members' morale and focus their strategic decisions at all career stages, while bearing the institution's mission in mind. Criteria and standards closely linked to the mission statement are the cornerstone of a coherent and successful recognition and reinforcement system

Recognition and reinforcement criteria and standards

In the first section, we saw that over the last decade society's expectations of universities have changed significantly, as have many institutions' mission statements and practices, both in North America and in Europe. These changes have rarely been accompanied by equally substantial changes in recognition and reinforcement criteria. What one might call "the paradox of the innovative university" has been created. Table 3 presents the main elements of this paradox. Of course, this list is not complete and it could be fleshed out by the experiences of other people and institutions.

Certain elements, notably those related to teaching, learning and training are common to all universities. Despite claims that these activities are and should be THE priority of every university, assessment criteria are still, in most institutions, restricted to students' assessment of classroom performance and they do not play a significant role in granting of promotion and tenure. The

Table 3. **The paradox of the innovative university**

New practices	Criteria or expectation
New technologies, distance learning, life long learning	Teaching activities still valued less than research and still awaiting comprehensive and objective set of assessment criteria for both traditional and innovative teaching
Team research	Publication as sole or first author
Supervision of doctoral theses in the form of articles	Publication as first author
Interdisciplinary research	Monodisciplinary evaluation committee
Research in partnership with industry or cultural or social organisations	Difficulty of gaining recognition for contributions to partners' publications; application of traditional criteria in evaluating impacts
Technological/social innovation	Rarely falls under heading of "research"; lack of evaluation criteria
Transfer of knowledge/outreach	Rarely falls under heading of "research", or even "teaching"; instead categorised as "service"; lack of evaluation and validation criteria
Establishment of international networks	Inadequate financial support; traditional expectations
Creation of new businesses (spin-offs, start-ups)	Embryonic or nonexistent intellectual property policies; minimal logistical support; infrequent academic recognition

"teaching portfolio" as proposed by Seldin (1997) offers a promising avenue to a better assessment and, as a consequence, increased prestige of teaching activities.

Other elements related to research are common to most universities and to the majority of research funding agencies in Quebec and Canada. These include lists of authors, interdisciplinary research, determination of individual researchers' actual contributions to team projects, and research centres or networks. The solution rests on a set of coherent rules established collectively and applied uniformly but flexibly.

Research partnerships, social or technological innovation, and transfer of knowledge call for in-depth reflection and more significant changes, clarifications or additions to the reinforcement criteria and standards related to the university's mission. We will see below some examples of such additions at the institutional level, but we would first like to propose a process for establishing these criteria and standards within an institution. We highlight the crucial role played by the intra-disciplinary body (department or faculty), which must determine its requirements based on best practices in the discipline in terms of research and innovation, teaching and community service. Later, after validation at the faculty level, this information will feed into the peer committees responsible for evaluating the contract renewal, promotion and merit pay files. The process we recommend is very demanding.

The experience of the last 15 years in our institution represents only a very partial implementation. A clear-cut change is apparent in the consideration of the characteristics of different fields with regard to research, and many of the paradoxes mentioned above have been resolved. When it comes to research partnerships, social and technological innovation, and spin-off companies, the academic parameters and practices adopted and valued in each field must be defined in order to be able to set rigorous and credible evaluation criteria. Only when this step has been completed will it be possible to value and reward what is correctly evaluated. This statement is true of all universities.

Some people might claim that these additions and changes to the criteria and standards could not be applied in major research universities, which would risk experiencing a decline in the quality of research. The analysis of 12 major US universities done by Tornatzky, Waugaman and Gray (2002) shows instead that these universities changed their criteria to make them compatible with their expanded mission statement, while maintaining their goal of excellence and their determination to remain leading universities at the international level. A few examples are discussed below.

- Pennsylvania State University created two committees to redefine “scholarship” (the academic career) and establish a system to reinforce outreach (community liaison and commitment): the University Scholarship and Criteria for Outreach (UniSCOPE) and the Faculty Senate Committee on Outreach Activities.
- In its latest strategic plan, Purdue set out explicit mechanisms whereby innovation, transfer of knowledge and community engagement will be measured, with a potential impact on the compensation system. The university retained the following indicators to measure performance related to community involvement and engagement: professors’ involvement, number of patents for technological transfer, number of start-up companies, number of regional technological centres, number of partnerships, placement of graduates and their retention in Indiana’s key economic sectors.
- The University of Wisconsin, which in the early 20th century developed a strategic plan focusing on society – the Wisconsin Idea – makes its expectations very clear in its *Handbook for Faculty Tenure and Promotion*: “Every tenure case should include evaluation of the faculty member’s accomplishment in the context of the Wisconsin Idea”, which confirms the importance of outreach in promotion criteria. For this university, outreach includes research, teaching and community service, and several benchmarks are proposed such as evaluation of the excellence of research partnerships through patents and copyrights.
- Finally, Virginia Polytechnic Institute and State University, in its outreach guide, suggests activities to be included in professors’ evaluation portfolios:

description of specific responsibilities, professional achievements in programme development and implementation, high-level non-technical publications, newsletters, other publications, Web sites, multimedia productions, professor's results or peer evaluation of the relevance and impact of programmes, recognition and awards for service to society.

In the course of our research we did not come across any Canadian universities actively involved in a similar process. The examples above, however, demonstrate the feasibility of such an enterprise and its coherence with the university's mission.

We should also note that, in addition to modified evaluation and recognition criteria, the above-mentioned US universities offer logistical support to partnerships, innovation and transfers, with some providing particularly favourable conditions such as an increase in professors' share of patent revenues and financial assistance for start-up companies. This support extends to the issuance of clear intellectual property policies. Finally, almost all of them offer awards for excellence in liaison and knowledge transfer activities.

These examples clearly illustrate the fact that not only is it necessary to adapt recognition standards and criteria to the realities and requirements of the innovative university, but that such a process is feasible despite its complexity and the upheaval it sometimes creates in our institutions.

Finally, we would like to make some recommendations concerning the process that ought to take place in our institutions to achieve the goal of a better assessment of the academic career path, which should lead to stronger motivation and a better quality of life for faculty members. Each university must make choices with regard to the innovative university model. Each will have to position itself with respect to different publishing tools and strategies, multiple forms of innovation and creative work, partnerships with the private sector, and the engagement of its professors in the community. Even more concretely, should faculty members engage in community liaison and transfer of knowledge? If the answer is yes, what support will be given and how will it be assessed and recognised? What is the status of start-ups, spin-offs and patents, as regards promotion and tenure? This transparent and accountable review of the mission statement is the first step in a long process that we will briefly describe in Box 2, without underestimating the related implementation difficulties.

Conclusion

We have described and illustrated a kaleidoscope of recognition and reinforcement strategies and the conditions for performance that we feel are appropriate for motivating professors at all stages of the academic career path, from hiring to retirement. We hope that we have demonstrated the crucial importance of bringing these strategies together within a coherent and

Box 2. Review process for improving recognition and reinforcement criteria and standards

Review of the mission statement at the institutional level; choice of recognised activities.

Identification of criteria and standards for each category of activity.

Identification of support to be given to each set of activities (*e.g.* centre for liaison and knowledge transfer, outreach office).

Faculty and/or departmental process for adapting and refining criteria and standards for each discipline and sub-discipline (*e.g.* publishing, innovation, outreach, patents).

Creation of flexible scenarios adapted to different phases of the academic career and applied to promotion and tenure decisions as well as to a merit pay system.

rigorous reinforcement system that is directly linked to the university's expanded mission and sufficiently flexible to respect the individual characteristics of different disciplines and adapt to different career phases. Finally, we emphasise that evaluation standards and criteria and the choice of valued activities constitute the cornerstone of any recognition and reinforcement system. That is why there is an urgent need to review these parameters within our institutions to solve the paradox of the innovative university. We feel that the proposed process and the anticipated results should lead to a second, equally major, initiative to establish variable academic career profiles, where all components are evaluated and valued.

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Motivating Knowledge Workers: Lessons to and from the Corporate Sector

by

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There is pressure on Australian universities to adopt organisational structures, job design, remuneration and performance management systems based on corporate sector best practice. However, these systems and practices are often at least 20 years old and are based on command-control bureaucracies that dominated the manufacturing and service industries. They are not only alien to universities but are increasingly seen as inappropriate to knowledge-based professional organisations in the corporate sector because the underlying assumptions about what motivates people are at odds with what research shows motivates professional “knowledge-workers”. This research identifies sources of motivation that resonate with what has underpinned traditional university remuneration, promotion and performance schemes. However this does not mean that there is no need for change to those traditional schemes. As academic work becomes more complex and the academic labour market more differentiated, there is a need to recognise this greater diversity within extended promotional and reward schemes.

Introduction

There is pressure on Australian universities to adopt organisational structures, job design, remuneration and performance management systems based on corporate sector best practice. However, these systems and practices are often at least 20 years old and are based on command-control bureaucracies that dominated the manufacturing and service industries. They are not only alien to universities but are increasingly seen as inappropriate to knowledge-based professional organisations in the corporate sector because the underlying assumptions about motivation are at odds with what research shows motivates professional “knowledge-workers”. This research identifies sources of motivation that resonate with what has underpinned traditional university remuneration, promotion and performance schemes. This is exacerbated by intergenerational differences as baby-boomers are replaced within the workforce by generation x and y people and by what is known to be needed to support creativity and innovation.

In this article I outline some of these parallels and argue that changes to university staffing policies and practices must be aligned with the changing needs of our sector rather than adoption of so-called best practice from other sectors, despite the pressure from funding authorities and the business sector to do so. There is a need for changes to traditional schemes arising from the growing complexity and differentiation of academic work as “Mode 2” knowledge markets (Nowotny *et al.*, 2001) increasingly apply and as massification of higher education lead to growing diversity of institutions everywhere. As academic work becomes more complex and the academic labour market more differentiated, there is a need to recognise this greater diversity within extended promotional and reward schemes.

Corporate “best practice”

As Australian universities are encouraged to become more business-like in their operations, one focus of external attention is on the terms and conditions of employment, reward and performance management processes used within universities. They have attracted criticism as being out of step with requirements for performance and accountability prevailing elsewhere. There is some truth in this criticism. However the evident weaknesses in practice mask a more sophisticated understanding of what motivates knowledge workers like academics and what is required to underpin the

innovation process. In other words, the prescribed solution to these weaknesses will have the effect of “throwing the baby out with the bathwater”. What is required is a more careful analysis of what universities are seeking to achieve and review of more experimental practice in those organisations that are seeking to respond both to the different needs and desires of knowledge workers, or professionals, and the new generations entering the workforces of developed countries.

Changes in corporate human resource processes over the past 10-20 years have stressed the identification of accountabilities through job design and enhancing of organisational performance through increased focus on individual performance. These processes tend to be based on command-control bureaucracies in which accountabilities cascade from top to bottom. At the same time performance management systems were introduced seeking to articulate and monitor tasks to be achieved. For many organisations remuneration systems were also adapted to encompass fixed and variable pay elements, with amount of pay varying according to assessed performance. The underlying assumption of such performance-related pay systems was that individuals would be motivated to better performance by access to more pay. In latter years even greater alignment was sought by tying remuneration to share price through stock options. Even at its heyday combined remuneration and performance management systems were adopted only by about 50% of organisations surveyed (Hay Group) and in the wake of the recent US corporate collapses those schemes involving share options have been questioned.

Although there are elements of these processes that can be considered for the university environment, the critical underpinning assumptions of top-down cascades of accountabilities, supervisor-based assessment and motivation based on increased pay are not identical to those applying in universities. Thus any application of these systems to universities must first address the nature of the underlying propositions and secondly articulate the changes (and consequences) that are desired.

Knowledge workers

Moreover while the processes outlined above have been progressively adopted by large organisations in the corporate and public sectors there is an emerging awareness that these processes may not be appropriate for building those organisational cultures and capabilities now seen to be important to organisational success. As organisations embrace the new mantras about innovation and people as the key to competitive and organisational success, they are exhorted to become more tolerant of mistakes and to allow greater room for people to take risks and experiment, to provide greater time for less

predetermined outcome-producing activities and to work within team environments that render accountabilities more diffuse. Some are even looking to universities to provide the model of how to operationalise these environments (for example, the campus-style developments seen in California, Scandinavia, and in Sydney) and to capture the talents of people otherwise problematic within organisations (Florida, 2002).

Studies by organisations such as Gartner of motivation of IT professionals, or knowledge workers, also reveal that if organisations are to capture them they need to provide differently framed “remuneration” and performance packages. While competitive pay rates are important they represent a “hygiene” factor (Herzberg *et al.*, 1959) rather than the differentiating element in what has until recently been styled as the war for talent. More importantly these people are motivated by the inherent stimulation of the work itself and value a capacity to finish the task, autonomy in task and to work with interesting individuals (Gartner, 2000; McInnis, 2000). These then are the sources of motivation for knowledge workers/academics, health professionals, lawyers and the growing ranks of professional workers.

If we supplement this with recent research on the different motivational factors for generation x and y (Russell, 2002) we add less interest in job security than financial security and an environment that is relatively less controlling than traditional work environments. They value autonomy and trust. Of course this research must be set alongside the circumstances of a shortage of professional talent prior to the “tech wreck” and prior to those people reaching an age in which investments in housing and families predominate.

Yet these findings are familiar to universities. It has been long understood in universities that academics are less motivated by absolute pay than by access to research time, resources and students. What matters to them is:

- access to resources (including research students) for research;
- access to time for personal scholarship and freedom of inquiry;
- degree of autonomy;
- an environment of debate;
- status accorded by peer review;
- involvement in decision-making;
- absence of administration.

Moreover, the promotional schemes based on internationally recognised and peer-reviewed publications are theoretically broader than any accountability scheme devised in the corporate sector. Traditional schemes for sabbatical leave recognised that creativity and research needed release from

operational requirements and time to reflect (Amabile *et al.*, 2002). Yet such schemes have been under significant threat within most Australian universities as workloads and external criticism of these have mounted. That external criticism, grounded in a view of organisations as instruments of task and cascading accountabilities (Morgan, 1988), represents those people as seeking to avoid accountability rather than pursuing the essential ingredients of their professional work. Yet the systems have been abused. But rather than seeking to overcome their misuse by applying more outcome-focused techniques used in corporate R&D sections to these release periods, they are effectively being phased out, just as other sectors begin to understand their value.

The changing nature of academic work

There are, however, changes occurring to academic work as a result of the structural changes occurring globally to the sector. As in other sectors these change drivers arise from the increasing globalisation of research and education markets as deregulation of domestic sectors happens, the advent of new technological developments that overcome former geographic constraints, together with the burgeoning demand and limited supply structures in most countries. They also arise from the changing nature of the knowledge sector itself as the organisations involved in the generation and dissemination of knowledge become more diverse and acceptance of what constitutes knowledge broadens (Nowotny *et al.*, 2001). Both Nowotny *et al.* and the Carnegie Education Foundation (for example, Boyer, 1990) have recorded the implications for academic work of both institutions and individual academics of these trends. The drive for performance, accountability and efficiency characteristic of other sectors and now applying to universities have led to an increased pressure for “professionalisation” of the teaching and community service functions of universities and a more focused outcome orientation to research and development. This “professionalisation” translates into a new deconstruction and specialisation of teaching and learning activities, especially as distance education and traditional face-face pedagogies converge in online developments. This replaces the traditional academic/administrative divide as the boundaries between administrative and academic work are increasingly blurred (Coaldrake and Stedman, 1999).

As a result of this growing specialisation and the increasing workloads that accompany the drives to both efficiency and performance, some academics are choosing to emphasise one aspect of academic work over others. In the United States the diversity of institutions and the size of the higher education sector has allowed for differentiation by academics. But in many smaller countries and particularly those in which the British tradition of

all-round academic remains strong the pressures to specialisation have not yet been accommodated in differentiated career paths. This is complicated by a gap in perceptions between the community and public funding authorities in many British countries that the main job of universities is teaching whereas for many institutions the research role is as important. Thus in countries such as Australia where there is a relatively small higher education sector by global standards, both in terms of numbers of institutions and by size of academic labour markets proposals by funding authorities that institutions develop a teaching-only professoriat are greeted with some concern. This concern reflects both a philosophical commitment to the traditional role of the academic and to the nexus between teaching and research, as well as fear about the capacity for academics to forge career paths on the basis of specialisation of academic activity in what is effectively a globally referenced market. In this way we see the tension between the needs of local policy within an increasingly globalised sector. The “market power” of most single national higher education systems to change the international reference points is limited. To move too far from those reference points is to risk the reputation of the national system and the careers of individual academics.

However, the trends that Nowotny *et al.* and the Carnegie Foundation have noted do need to be addressed and changes to the international reference points made. In particular there are many within our institutions who believe that research is unfairly weighted in reward systems and that universities should better recognise and reward on contribution to total academic enterprise. But this is not a simple teaching/research debate. As the new forms of scholarship emerge they need to be accommodated and recognised within these systems. So rather than responding (or not responding) to external demands for simple and differentiated reward and performance management systems that reflect an unsophisticated understanding of what motivates academic staff and what drives effective performance, universities instead should reflect on the changing nature of their work, the contributions their staff make to that work and the international labour markets in which they operate. They understand well what motivates and they should have confidence to design consciously the processes they need to enhance that for the benefit of students and the community. Nixon’s critique of the United Kingdom Institute of Learning and Teaching points to the simplistic policy responses that can emerge to complex problems by applying the conventional wisdom about what represents good management. According to Nixon, the ILT represents an attempt to come to grips with the demands for professionalisation of teaching and teaching quality but does it in a way that “restricts and standardises, rather than emphasising quality and creativity of outcome” (2001, p. 74). This partly reflects the natural tendency to seek to ensure quality of service by standardising processes but in doing so there is an

undermining of the very professionalism sought by restricting the professional's judgement (Mintzberg, 1988). Ironically this leads to the very "commodification" of education academics are wishing to avoid. What is needed is a more thoughtful analysis of how the legitimate demands for quality assurance are met within a profession. Standardised processes are the first generation of response – what should be the second?

But there is an opportunity to go further. A number of authors have raised a more fundamental point that applies equally to both corporate and university sectors. As the basis of revenue generation moves from capital to intellectual property and tacit knowledge the ownership of the "means of production" is no longer solely in the hands of the financiers of the company. It is in the heads of the "workers". This growing realisation is leading many to scramble to protect intangible assets and to codify informal and tacit knowledge through knowledge management systems. Yet Handy (2001) suggests a more fruitful and perhaps more ethical approach might be to re-cast remuneration packages to incorporate fixed bases and a variable element that relates to royalties on revenues generated by the corporation from the intellectual property of an individual. Thus remuneration packages of knowledge workers might more resemble those of novelists and other creators. They might also continue after the person has stopped working for the particular organisation but the "license agreement" continues. Drucker too (1992) recognised a decade ago that relationship between organisation and knowledge worker was much more one of mutual dependence than existed previously and that new ways of stimulating that mutuality were required, including the capacity to put knowledge to work. This requires a reconceptualisation of the nature of the "social contract" between enterprise and "worker" and the notion of membership of a "community" has been raised as one means of operationalising the view that there must be a shared purpose. Burton-Jones (1999) has suggested that the professional services partnership might represent a more appropriate ownership structure to reflect the new balance between revenue-generating "assets" of the knowledge-based enterprise. Each of these proposals is being actively pursued or considered by organisations that seek to transform themselves into knowledge-based organisations. Universities could usefully consider these as they struggle with the growing demands for changed conditions of employment and resistance to changes to intellectual property regimes as universities embrace distance education.

Conclusion

In this article I have sought to locate the current debate about the need to review university reward and performance management systems within the broader context of people management processes. In particular I have sought to

show that although there is significant pressure within some national systems, such as Australia, to adopt practices more commonplace in the corporate and public sectors as a means of improving the cost-effectiveness of universities and of bringing the terms of employment more into line with “community standards”, these practices are themselves under change as organisations seek to transform themselves into knowledge-based organisations. Indeed there are new processes being developed in the corporate sector that bear an uncanny resemblance to the very processes universities are under pressure to abandon. Moreover research on sources of motivation to knowledge workers and to the new generations entering the workforce resonate with traditional understandings of what motivates academics.

However the changing nature of the knowledge sector itself means that university systems and processes themselves cannot remain as they are. Knowledge work and institutional roles, including academic work and the role of universities, are changing within increasingly globalised settings. These trends must be addressed. Otherwise the perceptions that actual contributions through more diverse forms of scholarship are not adequately recognised will continue, corroding morale and motivation.

There are lessons that we can learn from other sectors about how to design new processes but they are not to be drawn from the corporate systems of the 1970s and 1980s. Indeed what would be refreshing is a co-operative process to forge a new set of processes between those organisations seeking to transform themselves into knowledge-based organisations and universities. This would allow the lessons of each sector to be blended and at the same time forge a new understanding of the work of the university within other sectors.

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Changing Identity in an Ambiguous Environment A Work in Progress Report

by

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National planners struggle to formulate policies which will enable mass higher and universal tertiary education systems to meet diverse needs for lifelong learning in a knowledge society. Institutional leaders experience ambiguity and stress in seeking an identity appropriate to their particular university in a contradictory policy environment which gives mixed messages. With high levels of stress, multiple conflicting demands and scarce resources, there is a natural but short-sighted tendency to manage more tightly and prescriptively as a way of trying to ensure productivity and accountability. This analysis from a large, broad-based and deliberately innovative Australian university examines these tensions. The new RMIT leadership has set out by transparent and participatory means to diagnose its environment, restate its mission and strengthen internal and external partnership to do its work. Networking and engagement are essential for a knowledge-making and knowledge-using institution to learn and contribute effectively. However, contradiction and uncertainty in the policy environment, which reflect wider societal ambiguities, make this a daunting task.

Introduction

This article brings together two issues central to the governance and management of universities, and to their traditional character and identity.

On one side there is the changing context and policy environment brought on by globalisation and the need for lifelong learning in a knowledge society. This has accelerated the transformation of universities towards being subsidiary elements in mass systems of higher education, within still less formed systems of universal tertiary education. The transformation is made harder by government efforts to manage competing pressures on a limited public exchequer, for instance for health care in an ageing community. A free trade orientation (exemplified by the General Agreement on Trade and Services) adds to the pressure on universities to diversify their sources of earned income and become more entrepreneurial.

On the other hand, managing large complex institutions through rapid change raises intransigent questions new to universities. As complexity increases and universities are required to meet ever more diverse demands, roles change and morale is put at risk. Work loads rise. Intensification increases stress levels, for which there are still few well tried and used measures. It is tempting to adopt increasingly tough management techniques, and to use more powerful and sophisticated information systems in the hope that closer control and accountabilities will somehow increase productivity and lower risk.

Imposing change from above however often creates resistance. This may be open and unionised, or covert and instinctual, and thereby harder to engage with as barely conscious. Superficial compliance may accompany persistent and chronic reversion to old habits. The shared planning which can lead to comprehension, belief and commitment requires patience and a kind of management toughness different from “managerialism”. There is however a temptation for managerially inexperienced institutional heads to put themselves in the hands of external consultants. Recipes designed for other kinds of organisations not staffed by knowledge workers charged with creating and using knowledge can lead the university deeper into difficulty (compare Duke, 2002).

Three propositions

Diversification is a key to sorting out the complex set of interlocked problems caused by the rapid transition to mass or universal systems. The subject is controversial and delicate. Unless it is very well thought through and comes to be widely valued and owned, it will increase conflict, and resistance to planning. Consequently it is regularly mentioned but not systematically followed through. Because there is so little open discussion in which protective interest is set aside, it is not clear what kinds of diversity are best accommodated within different institutions, and which are better managed by specialisation of function into different institutions.

Between these two options there are many other possible forms of federation, affiliation, association and networking. These require more systematic attention. New organisational forms, and new semi-institutionalised forms of networking and engagement, may take us beyond zero-sum formulations about diversity. An important issue is the connection between university and other tertiary provision. This can take the form of integration, affiliation with franchising and other linkages, stair-casing or simply informal partnership. RMIT is one of Australia's several dual sector universities in which the further education or TAFE and higher levels of tertiary are integrated into one institution.

At a different level, the stress experienced by individual academics (knowledge workers) from role complexity and work intensification will only be resolved through a similar process of open dialogue. That is to say, at individual worker as well as institution and national system levels, we need to break through current inhibition about diversity and specialisation. "Super-complexity" (Barnett, 2000) requires effective diversification, including role differentiation and altered reward systems, appropriately worked through for and at each level.

Cultural change is the key to changing institutional identity. It is less tangible and less easy to measure than other kinds of change, much less visible and dramatic than change to the structure of an organisation. Restructuring may be a necessary means to enabling better internal networking, partnership and release of creative energy, but it is never more than one means, never sufficient and not always necessary. Continuous review of experience will suggest better ways of doing things, including, especially, smarter ways of using new information technology and systems.

It is also much less difficult to formulate an elegant statement of mission and an in-principle strategy with targets for carrying it out than actually to implement it. At institutional as well as system level most policies fall over and die on the road to practice.

Deep cultural change is frequently an essential requirement. It calls for time and patience, as well as clear sustained purpose. It includes open, iterative, multi-directional forms of communication. Culture changes as confidence and success grow. It is a cumulative process. It moves through many maybe small steps of experience which reward collaboration, innovation and the taking of well-calculated risk. Significant and symbolic acts mark and assist the process, but it builds through the rising synergy of many apparently separate and usually modest positive changes. Because visible progress is initially slow, as roots take time to grow, it calls for a particular form of toughness in leadership. Without it institutional identity is not likely permanently to change.

The third proposition is that **the internal and the external are inextricably connected** through networking processes on which the creation of new identity depends (Latham, 2001). It is common to separate leadership and management roles and tasks between the internal (managing the organisation) and the external (reading, responding to and influencing the environment). In practice the two dimensions come together. They must be addressed by “management” in a much wider sense than can be exercised by top leadership alone.

In a large, complex and diverse system institutions must learn what Boyer (1990) called the scholarship of integration within the academy and across its traditional partition walls. More broadly we talk about breaking open silos. In Britain, New Labour aspires to joined-up government.

Breaking down disciplinary barriers, and also enhancing collaborative teamwork between classes of workers (administrative, professional, academic, technical) is one side of new management. It is required by and grows with the external networking on which universities depend to play a useful and sustainable part in networked knowledge societies. Without it, responsiveness and innovation will be stunted.

This means gaining understanding of and skill in a “fifth scholarship” to add to Boyer’s integration and application, and the older creation and dissemination of knowledge (research and teaching). It is about partnership or engagement (see below).

This third proposition is less familiar than the first two. Together these three propositions frame the task of changing and implementing institutional identity.

Management, leadership, governance

Even within English, terms cause confusion as their meaning in use changes. In this paper we write of management in a neutral sense to include all levels from individual self-management and small local teams to the most senior management of the CEO and her management team. “Managerialism”

is used in its pejorative sense to refer to the maladaptive, overly centralist and controlling forms of management usually adopted as a response to excessive stress.

Leadership is used more restrictively to refer to setting and sustaining direction for an institution. This includes creating and articulating values, vision, mission and a sense of identity, purpose, worth and consequent direction. The fact that we can speak of participatory planning and leadership shows that leadership does not need to take the form of the heroic virtuoso performer. It requires and implies charisma, but not the arbitrary imposition of authority associated with managerialism. We may talk of leading from behind or leading by following (Dunkin, 2000), of inspiring and involving others to share commitment and responsibility for moving in a direction. It is this kind of leadership which is being tested at RMIT. It includes modelling behaviour, consistency in practising what is proclaimed, and firmness in holding the organisation to the course agreed.

The term governance has a particular meaning. In a university context it refers to the responsibility of a wider governing body – board, council, trustees – which exercises oversight and requires accountability of management through the chief executive officer for all aspects of institutional health and performance. There has been an unfortunate tendency recently at least in Australia to slip into using governance as a synonym for management. This removes the distinct meaning and utility of the term.

Council's oversighting role and its effective representation of diverse societal and community interests are important to the task of forging a new identity and for modelling and supporting partnership and engagement at the highest level. This is however beyond the scope of this paper.

A problematic policy environment

The wider relevance of this RMIT work-in-progress report relies upon an understanding of the changing context in which it is located. The central issues can be generalised, but this also depends on understanding the particular setting.

Australian universities have more in common with other Anglophone systems, Commonwealth and North American, than with continental European systems. However the federal dimension is shared with both North American countries as well as some others. Conversely there appear, under pressures of globalisation and free trade in educational services, to be accelerating convergences with continental European systems and the experience of institutions in this region.

Australian higher education and its funding are a federal responsibility. In 2002 Australia entered its 7th year of a conservative Administration

inclined towards reducing public expenditure and diversifying the cost of higher education along market lines. Each Australian State, which is the immediate environment of each university but not its main source of funding, had a labour Administration in 2002, Victoria's being among the more socially innovative. RMIT thus has an accountability federally, for instance through an annual "profiles" exercise and via the new Australian Universities Quality Agency (AUQA). Broad policy is driven by the federal Department which is now known as the Department of Education, Science and Training (DEST), formerly DETYA and not long ago DEETYA. The Victorian Government engages with universities in that State. It is at times a subsidiary source of funding, notably for State and local regional economic and social development projects. This October [2002] RMIT joins the State of Victoria in hosting an international OECD Seminar on Learning Cities and Regions, the scope of which includes the role of higher education institutions in fostering learning-region socio-economic development.

The political and policy context for RMIT's evolving role and identity is thus complex. Two features add to its immediately problematic nature. One is the establishment of another inquiry into higher education by a new federal Minister, Brendan Nelson, who succeeded Minister David Kemp at the end of 2001, four years after the West Review of higher education (West, 1998). The second is an increasingly well orchestrated and swelling proposition that Australia needs "world class" universities and can afford not more than two. In practice world class refers to research concentration and the more concentrated and restricted funding of research.

Globalisation in effect constitutes the third and widest policy context in which an Australian university identity is made and refurbished. The influence of other systems is felt in many ways. It is expressed through global consortia and international market aspirations. RMIT is a member of the *Global Universities Alliance* (GUA). Its prestigious "sandstone" neighbour, Melbourne University, created Melbourne University Private (MUP, profiled at the 2000 IMHE General Conference) as a marketing clone, and led the creation of Universitas 21 (U 21). Intergovernmental bodies such as WTO and OECD contribute to the globalisation tendency (Henry *et al.*, 2001). Reference frameworks, performance indicators, benchmarks, quality regimes and league tables become increasingly internationalised. "World class" powerfully influences thinking in Australia about the contributions and relative place of nearly 40 different universities. External references tend to drive or override the national.

It is evident around European higher education circles that the United Kingdom is seen as a leader in planning and steering higher education. A particular influence on Australia is the British research assessment exercise (RAE). The RAE was introduced in the 1980s and has evolved through each

iteration, the most recent being in 2001. Hotly disputed in the United Kingdom, the future form and even existence of the RAE is now in doubt (THES, 2002). It has achieved the result of more heavily concentrating research funds into a small minority of universities within what is known as the Russell Group, especially to a few large and prestigious institutions with strong Medical and Science Schools led by Oxford and Cambridge. Beyond the United Kingdom the talk – and the messages brought back from overseas to Australia by institutional planners – is of extreme concentration – Europe's top dozen, Japan's top thirty or Asia's top ten research-led universities. It is a national policy preoccupation and perhaps a concern to pride that no Australian university is seen as ranking among the world's top fifty.

The consequence of this and parallel policies in the United Kingdom, still the strongest single overseas reference point, gives pause for thought. In Britain there is equally firm policy insistence on Teaching Quality, and on Widening Participation (W/P). An age participation rate target of 50% of those aged 18-30 benefiting from higher education is set for 2010. The present system of postcode preferential funding is being replaced by different systems intended to nurture and reward W/P better.

Reflecting an established dominant hierarchy of both institutions – from Oxbridge to “new” post-1992 universities – and activity – research over teaching – however, the funding impact of these policy priorities differs sharply. The RAE rewards success and has legitimated heavy concentration of public funds for research to a few universities. Despite its onerous compliance requirements, teaching quality assessment (TQA) has not led to differential funding for teaching. Flatly contradicting the research arrangement, the effect of W/P policy initiatives has been partly to allocate additional resources to universities which perform poorly in W/P terms in order to encourage better performance.

The result is a confused and contradictory situation requiring clear leadership from the Higher Education Funding Council of England (HEFCE) under the new Chief Executive Howard Newby. This means grasping the nettle of diversity, and developing the funding regime in such a way that different roles and strengths are rewarded according to different indicators, in order that the system as a whole meets the plural objectives required of it. The reigning tendency to reinforce a dominating one-dimensional hierarchy is creating a severe identity crisis for the non-elite majority of institutions. These are required to play in a research contest where they can only lose.

This effectively subsumes and submerges the total identity of “new universities”, including any excellence in teaching and any contribution to social equity via widening participation, and the development of communities through outreach and partnership.

Ultimately a poorly valued and low status university – and much more so a College of Further Education, TAFE or Community College – is not only unable to be recognised and rewarded via the RAE context. It is also disabled from playing its essential part in widening access (W/P) as well as from contributing to the kind of research or scholarship or knowledge creation which is needed in super-complex modern society. It is said that good but disadvantaged students must be allowed to get into “good universities”. Meanwhile other universities are stigmatised as “dumbed down TAFEs” – a phrase which captures the dysfunctional malaise of this whole way of thinking, not just for universities but for other tertiary institutions as well.

This excursion into the UK policy arena demonstrates how vital is our first proposition, namely diversity, to the evolution of effective mass systems comprising confident and vibrant institutions with different missions. Australia abolished the binary divide in favour of a unitary higher education system a little earlier than did the United Kingdom, at the end of the eighties. In Victoria several of the resulting “new universities”, some with a century and more of valued educational service behind them, are dual sector institutions. That is to say they include further (TAFE or technical and further education) and community college level work within the enlarged university. Of these RMIT is the largest. The potential strength of such institutions as contributors to a more democratic knowledge society is put at risk if the two-world-class-university response to globalisation reproduces there the kind of dominant hierarchy which the United Kingdom has now to manage and which almost all systems already face or will soon come to confront as a policy dilemma. The world’s largest and most wealthy “system”, albeit federal, that of the United States, may be the most promising model of exception.

The RMIT situation

The Royal Melbourne Institute of Technology is a dual sector university. It combines TAFE with higher education in a vertically integrated structure across six Faculties. With 55 000 students it is among the nation’s largest universities. Its origins as a people’s technical institute for those unable to aspire to the University of Melbourne gives it a venerability and a place of affection in the city of Melbourne. It is described as a Melbourne icon. In the past decade it has transformed itself into a leading provider of international education on and off shore, and an engine especially of applied research as well as professional education. Its non-core-grant research income has risen, and it is in the process of creating a separate RMIT Vietnam university in Ho Chi Minh City with a national network of Learning Resource Centres.

To emphasise its university identity RMIT added the word University to its established name of RMIT. It is the Victorian member of the club of five

Australian technological universities known as the Australian Technology Network (ATN), which in the face of a new research selectivity assault have discussed federating into an Australian University of Technology (AUT). More locally RMIT has created unusually strong partnerships with community stakeholder groups. These range across a spectrum: from the streets as well as the boardrooms of the inner city through deprived outer fringe and suburban neighbourhoods and schools to more remote rural communities undergoing major economic and social change at the extremities of the State – Hamilton in the west and East Gippsland in the far east. Partnership and community engagement have become significant and distinctive features of the RMIT mission and behaviour.

Ruth Dunkin became RMIT's second vice-chancellor in October 2000. Her inaugural lecture – “From Entrepreneurial University to Innovative University” (Dunkin, 2000) – was delivered a month after she participated in the IMHE 2000 General Conference on The Entrepreneurial University. A conclusion of those conference deliberations, following the lead of the European Council of Innovative Universities (ECIU, 2000), was to favour *innovative* over *entrepreneurial*. Professor Dunkin's inaugural lecture built on this in setting new directions for RMIT. That is why this paper is called a work in progress report to IMHE on how this identity, and the effort to put it into effect, are progressing.

A crisis of identity?

The inaugural lecture spelt out two assumptions, thereby defining essential external and internal characteristics of identity-making: that universities are products and co-producers of their age; and that leaders lead by following. Eleven propositions followed:

1. that RMIT is a knowledge organisation in the knowledge services sector;
2. that the nature of that sector is changing, requiring adaptation for survival;
3. that these changes are driven by fundamental changes in the nature of society especially to do with complex interactive processes of innovation;
4. that if universities do not adopt a new role they will be increasingly redundant;
5. and that RMIT has advantages of breadth, depth, independence and a capacity to help people structure knowledge;
6. that universities need to use their capabilities differently, develop new capabilities, and learn from others, moving beyond boundaries and beyond a pure market frame to be engaged and interconnected around social as well as economic values and development;
7. that RMIT needs both to deepen and widen, exercising the four Boyer scholarships (Boyer, 1990) and stressing integration and collaboration;

8. that this amounts to a significant challenge for RMIT, changing many familiar assumptions; in particular “new relations between the university and external communities require a stronger tradition of collective action than the tradition of individualism historically rewarded and trained for in academia”;
9. that others’ assumptions as well as our own have to change; specifically, inappropriate management models and accountabilities, old structures and processes, should not be assumed or imposed;
10. that vigorous debate is needed about inappropriate imposed assumptions rather than retreat in the face of “what appears inappropriate pressures”; the Victorian Premier’s adoption of the four pillars of learning in the UNESCO Delors report – to know, to do, to live together, to be – (Delors, 1996) is welcomed here;
11. that this new role for universities, and the new institutional arrangements it implied, were winning acceptance; it implied RMIT becoming a community, and sharing membership of other communities of practice and locality: “we will be bound together by shared values and a passion about making a difference, helping to shape as well as to serve.”

This is a lucid articulation of identity for RMIT. If however there was a sense at the end of 2000 that this was winning acceptance, why suggest possible crisis two years later?

There are two answers, one mainly internal, the other mainly external. They are inextricably connected – see Proposition 3 above.

Less problematic is the internal. Proposition 2 is that the essential change is cultural. It is however perplexingly slow, and initially barely visible. It is easily obscured by more dramatic events such as the AMS system failure (see below). Two years is a short time to be able to see some kinds of results. More problematic is the external side, where national attempts to support diversity of mission (Proposition 1) have so far failed, if less spectacularly than in the United Kingdom.

Trends in the short time since the inaugural lecture was delivered appear unsympathetic to the creation of a strong identity anchored in the different Boyer scholarships, and flourishing through “research that makes a difference” in strong regional partnership. Not only do the lessons of Boyer appear more lost than taken forward in the national policy arena; so too do those of studies of research and innovation which show the importance of “Mode two knowledge production” (Gibbons *et al*, 1994; Gibbons, 1998). It is as if government embraces propositions with its rhetoric but prevents implementation through its practices.

For RMIT the challenge is to sustain cultural change and embed a new identity in the face of an apparently hostile funding regime which rewards other behaviour. This tendency in the wider policy environment allies with a natural conservative tendency among both academic and other university staff to revert to familiar roles and behaviour. Reversion finds supporting justification in the context of these ill thought through government propositions. Is it possible to forge sufficiently strong outside partnerships to counter-balance this tendency and reward new roles and behaviours within the University?

Examples of work in progress

From individual to collective teamwork and recognition. The former RMIT's Vice-Chancellor's spacious office and reception room in the original stone RMIT Building 1 now houses two teams of community partnership workers. These work as teams within themselves, between themselves, and with other teams and groups of expertise inside and beyond the several Faculties. The symbolism is strong if accidental – Dr Zhivago's Moscow residence in late 1917.

The new Vice-Chancellor's office is across the road on the seventh floor of a new office block. Reception is a facility shared by the whole floor. The Vice-Chancellor's office is one of a dozen similar rooms around an open plan office floor where senior executives and their support staff work in an interactive, easy-communication environment. In one corner is an open area with a group of easy chairs. Here the Vice-Chancellor's Executive meets each week – behind no doors. From the Vice-Chancellor's office regular messages on the University Intranet explain policy in practice. Where something has gone wrong they tend to include a personal apology. They are signed by unadorned first name.

Models and symbols go only so far, but they are a powerful means of providing leadership in cultural change. Somewhat less unfamiliar is the management approach used through 2001. A Strategic Planning Forum wider than the Vice-Chancellor's Executive worked towards an implementation strategy for and with the University. This took the form late in the year of a set of Powerpoint and overhead transparencies (OHPs), which sought to move the vision and propositions of the inaugural lecture into operation. Only in mid-2002 is this material being developed into a “strategic plan”.

Though not directly addressing structure, the OHPs were seen by some to imply change to the Faculty structure. This led in turn and by invitation to several alternative propositions being put forward for managing change, over the 2001-2002 summer period. A sense of the state of play in 2002 is that if the existing Faculty-based structure can deliver agreed and required changes, and

innovativeness itself, notably in respect of curriculum renewal, enhanced teaching quality, effective partnership and integration across disciplines, levels and kinds of activity, then it will continue. If the structure proves unable to deliver thus it will need to change. Cultural change and new processes to meet new purposes lead, structural change following if and only as shown to be necessary.

Progress slowed in 2002 through the coincidence of several partly unanticipated events forcing concentration of effort around urgent priorities. The big Vietnam development is one such. A budgetary concern with higher than tolerable fixed (essentially staffing) costs and less than adequate financial (mainly cost) information is another, familiar to many universities. Serious problems in implementing the new IT Academic Management System (AMS) have turned a prospective early MIS benefit for enhancing management efficiency into a widely experienced crisis in managing ongoing business as well as regulation and morale. This imperative puts longer term innovation-building partly on hold. Different cycles of profile accountability and quality audit carry external imperatives, diverting resources from such long-term developmental work as deep-seated curriculum renewal and devising strategies for wider participation and clearer pathways. There remains a determination to realise the partnership vision, building and using more internal and external links and connectors.

Most important and problematic in combining external pressure with internal identity transformation is research, for reasons explained above. Research concentration is assigned high priority for 2002, as universities other than the sandstone eight are threatened with loss of research identity. This carries with it latent schizophrenia between the new mission of the 2000 inaugural lecture and the practical impact of the government policy of research selectivity and concentration. Echoing the predicament of new UK universities, RMIT appears destined to play a game it cannot win. This contradicts its chosen and applauded identity as an innovative university, putting this at risk.

RMIT is publicly committed to “making a difference”, and to doing research that makes a difference. It has formed a Research Partnership Group, and a Community and Regional Partnerships Group, both working with the Pro-Vice-Chancellor for Research and Development across all Faculties to broker and forge partnerships for the shared production and use of knowledge – Mode two knowledge production. Notably in the more distant regions of East Gippsland and Hamilton, also closer in, in metropolitan North Melbourne, these partnerships are many-stranded. They encompass bricks and mortar (as well as clicks and mortar), R&D, distance or electronic delivery of degrees, parts of degrees, and short courses, consultancy and regional development

initiatives, in various bilateral, multi-partner and regional forms of community, enterprise, economic and social development.

Part of the current leadership initiative is to diagnose better and learn more from this experience, in the process creating a more explicit and better shared understanding of the processes involved. This may be called a *fifth scholarship*, or *the scholarship of partnership or engagement*. Although strongly associated with the scholarships of *integration* and *application*, it is a distinct mode of scholarly being. It calls for different skills, attributes and behaviours. It sits at the heart of the intent of the Innovative University as sketched in the inaugural lecture.

It is also a route into becoming a Mode Two institution, giving effect to new ways of learning set out by Gibbons and others in 1994 and subsequently. It is not an easy concept to embed, given the traditionally competitive and individualistic practice of scholars who rely for reputation and promotion on publication in traditional disciplinarian journals. In this struggle for the academic identity and soul, culture, passion but also reward systems matter, including appointment prospects to and promotion prospects in other institutions staying within the older paradigm. The crisis referred to earlier includes this institutional predicament. It is difficult for even a very large university to adopt a new paradigm if the mass higher education system and its policy-makers keep heading elsewhere.

Trial balance

This paper is about a place founded 115 years ago, which has grown and adapted to remain a great service institution. In another sense it begins with the most recent IMHE General Conference, on the Entrepreneurial University. That Conference heard about progress in Burton Clark's five chosen European universities. It concluded that innovative was a preferable concept. Clark's five essential propositions for creating and managing such a university however appeared robust – from strengthened steering core to integrated university-wide entrepreneurial culture (Clark, 1998, 2000).

The 2000 General Conference was most interested in the first of the five propositions – the strengthened steering core – possibly because of where most continental European universities are coming from, but also because CEOs value executive authority. This paper suggests that the toughest and most important part of the agenda is creating not a strengthened steering core but a stimulated academic heartland with an integrated innovative culture, especially when diversity is not effectively promoted and rewarded at system level. In these conditions RMIT's greatest strengths, its breadth, community anchorage, dual sector character and relevance to its communities, may look more like disadvantages.

RMIT continues purposefully on the route indicated in October 2000. Certainly unpredicted events have delayed progress, the AMS being the most serious – a broken chassis rather than merely a puncture. Some passengers remain doubtful about the direction the institution is heading. A few of the more disruptive might better dismount and leave for a different destination.

Slipping and backsliding are normal between signing up to such a new proposition and implementing it whole-heartedly in – to change the metaphor – every Faculty backyard. It remains to be seen whether this means removing the backyard fences or simply opening more gates between these private spaces. It takes time to learn more reciprocal forms of engagement, and for new rewards, sources of energy and income to replace those familiar to old academic tribes, using Becher's favoured metaphor (Becher, 1989).

At mid-2002 RMIT's drive towards the innovative identity manifest since October 2000 is being sustained, but the rate has been slowed by unpredictable misfortunes, and by more predictable resistance as more than superficial change is felt, as planning moves on to implement the real and radical changes implied by the inaugural lecture. The sense of urgency is undiminished. Patience may be in short supply, if formal compliance among second and third level leaders and managers fails to translate into decisive action. The tasks of internal communication, dialogue and persuasion are time-consuming and endless. There are important if tactical questions: how long to wait for people to come round, how often to intervene decisively to break through barriers and to demonstrate unremitting intent. It is not easy.

Tougher still is engaging with a Government which speaks of regional development but negates its own intent by treating research funding and reputation in highly restrictive, essentially big-science, terms. This is no less serious for the fact that areas favoured for research are chosen for their potential commercial exploitation. This is current Australian policy, lucidly expressed by the Chief Scientist. Other sources of research income, especially for mode two partnership work, long an RMIT strength, continue to increase. However, energy is diverted and morale is damaged if Government requires research concentration exclusively on its immediately perceived priorities. This may destroy other areas of good research and potential. If morale collapses and the best staff leave, it becomes harder still to create and act out a relevant and valued identity

The present policy implies creating a few high-powered and leading research centres – whether within or outside universities – which are international leaders in chosen fields, such as light metals and some aspects of genetic engineering, but without breadth and depth of support in a high-skill labour force and a wider well-educated society to feed into, underpin and use what is thus generated.

Ultimately this implies a disjointed society, intellectually and socially more polarised, built on the weak foundations of a low-skill economy rather than the surer and deeper foundations of a knowledge society. In such a scenario most of Australia's 38 universities have little place as universities, especially broad-based institutions dedicated to comprehensive regional and community development, and to wider participation in the new IT-mediated society and economy. Until Government itself moves to this wider and more modern understanding of knowledge production and knowledge management, the external policy environment will continue to make the task of institutional development and innovation through partnership and engagement difficult indeed. It remains the responsibility of university leadership not to be tempted or bullied off course, in creating and implementing an appropriate identity for the longer term.

Five questions

- How far can you rely on your institution – governors, staff, students, community – to rally round in support of long-sighted development despite problems with an unsympathetic or unimaginative government?
- Is an existing sub-optimal arrangement better than the disruption involved in significant structural change?
- Is the removal of a resolute high profile opponent of change a sensible move *pour encourager les autres*?
- How far can leadership rely on winning hearts through modelling and nurturing cultural change, compared with playing on hip pocket nerves via direct reward systems?
- What sticks do you need along with your bunch of carrots?

Endnote

A note of irony and a suggestion

The irony of an Australian two-world-class-universities proposition is not just that it is ill-judged to meet the nation's medium and long-term needs. It is also latently conflictual in the near term.

Australia already has one unique research institution, the Australian National University (ANU), created after World War Two to be a world-class research institute and bring back the best scholars from abroad (also, more problematically, to serve as a powerhouse of Australian society). Going from one to two would prove quite a challenge.

ANU is one of Australia's eight elite or "sandstone" universities with their own representative organisation in the federal capital. It is conceivable to have one unique "world-class" ANU, possibly as spearhead of an "Australian

universities networked research system”. Beyond one, intransigent problems will surface over which two are to be blessed, and the sandstone marriage could well unravel. Anointing two intended world class universities only would threaten the club, demeaning the rest of the eight in with the common herd of non-world class institutions. No imagination can equate two with eight. Beside this, the ninth and tenth are also knocking on the door. A system which implies 30 or indeed 36 essentially teaching-only institutions devalues and degrades university teaching-learning as well. It also ignores the Mode Two knowledge-creation paradigm, threatening morale and identities system-wide.

Rather than allow itself to be drawn into the currently fashionable but inherently unstable world-class-university debate, with the significant collateral damage this may inflict, a government well-endowed with vision and courage of leadership would instead aspire to one world-class university system which will nurture a high-skills knowledge society. Such a “steered system”, as New Zealand describes it, will expect and require all universities diversely to exercise and be rewarded for different combinations of the four, or indeed five, essential scholarships.

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Motivating Individuals: Incentives, Staff Reactions, and Institutional Effects

by

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The article studies relationships between changes in institutional funding patterns and staff incentives. Although specific internal university incentives were not considered in any detail in Academic Capitalism, it is believed that the alterations in HEI funding patterns instituted by governments described therein almost certainly created organisational dynamics that resulted in more specific incentives being created or expanded within HEIs, and that these incentives had a direct impact on academic staff. This led the author and PhD students to try to establish whether there were in fact causal relationships among the changes in institutional funding patterns and the activities within HEIs. They conducted econometric analyses to study how involvement in grant and contract work impacted the time allocations and productivity of individual academic staff members. The author concludes that declining revenue shares from government block grants is having major impacts on HEIs, but that the magnitude and nature of these impacts, is enormously varied, not only across HEIs but within as well. Within institutions, effects of shifting revenue structures depend upon many factors, including the extent to which and the manner by which the institution transmits environmental pressures to internal units and individual staff members.

In *Academic Capitalism*,¹ Sheila Slaughter and I reported on on-going changes in the nature of academic labor in four, major English-speaking nations: Australia, Canada, Great Britain and the United States. We argued that these changes were as great as those induced by the industrial revolution during the last quarter of the nineteenth century. We attributed the contemporary changes to destabilization of higher education institutions (HEIs) brought on by globalization of the political economy in which governments altered their basic conceptions of the roles and purposes of HEIs and changed funding patterns accordingly. Identifying HEIs as critical to economic growth in the post-industrial society, governments sought to increase HEI efficiency and effectiveness through new systems of financial incentives, specifically by causing them to become more entrepreneurial by reducing, relatively, block-grant support. As “assured” revenue shares from government declined, HEIs would be encouraged strongly to increase shares from contracts with and grants from business, industry, and government agencies; licensing and royalties; sales and services of educational activities; endowments; and (or) new or increased tuition and fees from students, who were seen as replacing the general society as the primary beneficiaries of higher education.² We demonstrated that such revenue shifts were indeed occurring, that financial incentives to HEIs were changing.

Although specific internal university incentives were not considered in any detail in *Academic Capitalism*, the alterations in HEI funding patterns instituted by governments described therein almost certainly created organisational dynamics that resulted in more specific incentives being created or expanded within HEIs, and it is these new or expanded incentives that impacted academic staff directly.

From original data for the United States and especially for Australia and mostly secondary sources for Canada and the United Kingdom, in the 1997 book we documented some of the changes in academic labor, and we hypothesized about future changes. We sought also to connect changes to causes. Major tenets tested were whether entrepreneurial activity had increased during the 1980s and 1990s, whether any increases could be connected to changes in revenue patterns, and how those activities impacted academic life. Implicitly, we assumed that if incentives for institutions were changing, they would be impacting the employees of these institutions, including academic staff.

We found that indeed many academic staff had become more entrepreneurial, and we showed the relationships between increasing entrepreneurship and changing HEI revenue patterns. We concluded that academic capitalism was having major effects on the daily lives of central administrators, department heads, and academic staff.

One of these changes was the increased valorization of academic research, in particular that which generated new revenues for HEIs and for individual academic units. Perhaps valorized most was the bringing of products and services to market through licensing and royalty agreements. Though revenues from these sources typically were small relative to other categories, the possibility for the “big hit” almost always was prominent in the minds of those responsible for HEI finances, thus raising the stature of these activities and of the individuals involved. Of course research had always been valued relatively highly, as was evidenced in most university reward or status systems; however, increased staff stratification was noted as units became more dependent upon the revenues generated by individual staff members and research collaborators: entrepreneurs attained higher status within their units; often, they realized higher salaries; and sometimes they were assigned lighter teaching loads. The result was that staff entrepreneurs gained relative power and status on campus. As one Australian university Principal observed, “... [a Center Director] is a pain-in-the-you-know-what, but he is a hell of a grantsman. We just have to put up with him”. And as the Vice Chancellor of another Australian university discreetly informed me after rising to close his office door, “If these ‘million-dollar-a-year’ staff ever realize how much they are worth to us, we are in a lot of trouble”.

We observed considerable evidence of increased division of labor among academic staff as a result of academic capitalism, and we speculated that there was much more to come. The problematic Center Director mentioned above had built a largely independent, research center employing approximately 40 full- and part-time staff, ranging from secretaries and unit accountants to Public Information Officers, PhD – holding Research Scientists, and professors who either were employed full-time by the Center or held joint academic appointments in departments. His unit was virtually self-contained, in that the unit could and did conduct almost all of its own business. Most functions performed at the institutional level were replicated within the Center. Staff were fiercely loyal to the Director and tended to view the Center more as a business organisation than as an academic unit. In contrast the “indispensable Professor” above conducted his entrepreneurial activities largely within his academic department, but the number and range of specialists employed and those on separately-funded and joint appointments were only somewhat less. Nevertheless, the orientation of his department was clearly academic whereas the afore-mentioned Center was characterized by a

commercial culture. In the final chapter of *Academic Capitalism*, we foresaw additional labor diversification and the creation of new internal units as greater emphasis was placed on revenue generation. We employed notions of institutional isomorphism to argue that HEIs would create more and more special units and offices to relate functionally to funding agents, but also the inevitability of greater specialization among academic staff as the utility of varying personal strengths became evident in the new environment.

Although the connections to shifts in HEI funding patterns were not always clear, we identified, hypothesized and reflected upon many other changes in academic labor. For example, we concluded that competition among academic staff and units was on the increase, but so too was cooperation, as individuals and units combined their talents to increase their chances of receiving extramural funding. The value of inter-disciplinarity also was evident. We heard, too, many complaints from staff about requirements for proposal submission for funding that previously had been received almost automatically from university councils, and we heard complaints from university administrators now required to compete for government funds that previously had been allocated on various, quasi- per capita bases. The complaints were less vociferous, of course, from those institutions that fared best in the competition.

From academic staff who were more junior, there were many grievances about ever-rising academic expectations for promotion and tenure. Standards were said to be rising, not only in regard to publication quantity and quality, but also in regard to generating grant and contract revenue. What had been common place in many scientific and technical fields was coming to be required, they said, in the social sciences, humanities, and human services professions.

In some HEIs we heard a good deal about greatly increased stress among staff; in others few such claims were heard. Later, it became clear that the environments of certain types of HEIs were much more likely to be stressful, but also that there was great variation within institution in this regard. Some fields were much more entrepreneurial, and stressful, than others, and among institutions there was great variation in emphasis place upon generating extramural revenues. Philpott (1994), for example, reported very high degrees of stress among the staff of a technological university that emphasized revenue enhancement. "Teaching institutions" tended to be less stressful, according to academic staff interviewed.

With some qualifications, we forecast the growth of inter-institutional competition for faculty members who were successful entrepreneurs, for major differentiations in faculty salaries, especially but not exclusively in those countries in which such differentiation was permitted. Clearly, this

growth was already evident in the United States; we expected it to emerge in various forms in other countries. One form that had emerged was the increased tendency for academic staff to migrate from one university to another within countries in order to attain promotion to a higher rank and a concomitant higher salary. Although we were correct in most of our prophecies about competition for faculty, we failed to predict the increased international competition for highly productive faculty that has evolved.

For these and various other conclusions, hypotheses, and conjectures made in *Academic Capitalism* about the effects of shifting funding patterns upon academic staff we relied mostly upon relational data and perceptions of those directly involved. We did not establish causal connections between the revenue shifts and HEIs' internal activities, nor did we examine how those shifts played out within HEIs. Of course changes in institutional revenue patterns would be expected to have varying effects, depending upon the internal resource allocation policies of those institutions, and these resource allocation policies are the incentives that are of primary interest in this paper. Examining the effects of those incentives was a purpose of a later study (Leslie *et al.*, 2001).³

Assessing the impact of institutional incentives

By the time we finished *Academic Capitalism*, probably the major higher education policy concern among governments within the United States had become whether faculty members were devoting too much time and effort to research and revenue generation at a "cost" to teaching, in particular the instruction of undergraduate students. We examined this and a substantial number of attendant questions in the new study.

As background, we decided that we should establish whether there were in fact causal relationships among the changes in institutional funding patterns and the activities within HEIs. We decided that we should test these relationships at all three institutional levels: the university overall, its internal academic units (departments or facsimiles), and its individual faculty member. Three of our PhD students conducted related studies for their dissertations.

Using national data for 175 public four-year institutions, Hasbrouck (1997) built causal models to test the institution-level relationships, specifically whether variations in internal university functions could be connected causally to changes in institutional revenue patterns. For this she constructed models that related institutional revenue changes to changes in financial allocations among university functions, for example teaching, research, and public service. Whether expressed in dollar or percentage terms, instructional expenditures – the area of greatest interests to public policy makers –

consistently and strongly were predicted primarily by amounts of and shares of revenues from block-grant appropriations and tuition and fees, as expected from theory (resource dependency). Primarily, gift, grant, and contract revenues were targeted on research, again as expected. In fact in all expenditure categories, the expected relationships were found: all else held constant (*cet. par.*), the expenditure patterns suggested that the intentions of resource providers such as political leaders and students, who supply the appropriations and tuition and fee funds, were satisfied.⁴ In summarizing her findings, Hasbrouck (1998, p. 8) concluded: “Were a particular revenue source to decline either absolutely or relatively, one would presume that expenditures for that revenue’s related activity might also decrease.”

Ward (1997) and D’Sylva (1998) considered how the changes in revenue patterns played out at the level of the academic department. Their results validated the wisdom of considering all three institutional levels; that is, generalizations about HEIs overall should not be extended automatically to their internal actors. Using varying strategies, Ward and D’Sylva showed that the changes in institutional funding usually did not transfer directly changes in unit efforts. While shares of institutional revenues committed to instruction were declining at the institutional level as grant and contract and other activities increased, expected changes were not noted at the department level. Ward (1997), for example, found that research-active departments produced slightly more, not less, SCH (student credit hours) than less research-active departments although they offered slightly fewer class sections. D’Sylva (1998), relating variations in departmental revenue sources to departmental activities, found that in five of six fields of science the (revenue) “returns” to teaching, on average, were much greater than the returns to research. The reasons for these results were instructive. Our field work suggested that some institutions simply did not provide unit incentives in their resource allocation schemes, and the incentives offered by some were largely ineffectual. The major reason, however, was that academic departments acted as mitigators of the effects of changes in revenues: Strong in the belief that instruction was their *primary* task, they adjusted their academic production functions as necessary to staff their course offerings and then allocated the remaining resources in creative ways (Leslie et al., 2001). This conclusion was confirmed in several ways, including an examination of the budget reallocations of departments and interviews with department heads.

As part of the larger study, we conducted econometric analyses of how involvement in grant and contract work impacted the time allocations and productivity of individual academic staff members. Holding constant the quality of the staff member’s research, teaching, and service, we found, for example, that staff with external funding spent about one hour less per day on

instruction than did those without such funding, about one hour more on research, and 0.8 more hours on service, yielding a net increase of about 0.8 hours per academic work day. The average work week was 57 hours per week, with teaching accounting for about 42% of the day and research an additional 33%. We turn now to a discussion of the incentives offered by a sample of US public universities and of the effects on internal units as viewed by department heads. Although our sample technically was of only 11 universities, the range of incentives offered was representative of most of the major strategies discussed in the substantial literature on this topic. Further, the analysis was in-depth, involving interviews with almost 200 department heads, analysis of unit budget allocations, and interviews (Time Budget Analyses) of approximately 600 faculty members, all samples stratified by department and by six fields of science. From these sources we composed descriptive responses to resource allocation incentives and we conducted econometric analyses.

Reactions to incentives within the eleven institutions

The descriptions that follow begin with the two HEIs considered most likely to demonstrate increases in entrepreneurial activity due to their financial conditions and form of incentives employed. These two HEIs also are the focus of the discussion of the econometric results in the next section.

Forest State University

In the context of an historic statewide pattern of significant reductions in state appropriations, which already had led to an institution-wide effort to increase class loads, department heads cited a “productivity formula” that had been introduced at the university level and that was essentially a form of Responsibility Centered Management (RCM).⁵ The overriding emphasis of this formula, which involved setting production targets, was on credit hour generation, particularly at the undergraduate level. Thus far, the formula had been utilized primarily for allocations to the college (department clusters) level although some heads expected deans to begin using it for allocations as well. The allocation of teaching assistant positions in particular was linked to the formula, and some heads believed, apparently incorrectly, that the allocation of faculty lines and state monies also were connected to department undergraduate credit hour production.

Unfortunately, whereas the productivity formula was intended to provide an incentive for enrollment growth, institutional enrollment *declines* had occurred, consistent with a statewide pattern; the result was that the RCM system was seen as ineffective, inappropriate, and punitive. It was causing internal competition for fewer students. Further, there was a clear sense that

professional schools were winning out in this competition, and arts and sciences were losing. The push was for units to take as many students as possible.

Also, the central administration encouraged departments to collaborate more with the private sector and to engage in entrepreneurial research. With the exception of those in computer science, few department heads or faculty responded positively to these encouragements, citing the lack of any connection to resource allocation. Department heads and faculty were too busy scrambling for general education credit hours to undertake entrepreneurial research initiatives; it also seemed that many departments lacked any strategic sense of how to position themselves in this competitive environment. There was much evidence of fiscal stress and disequilibrium but little evidence of entrepreneurial responses to financial incentives, at least as reported by department heads.

Center State University

At Center State, whose implementation of RCM probably was greatest, the primary institutional initiative was a “teaching capacity model”. As at Forest State, the emphasis was on instructional productivity at the undergraduate level. Here, too, the incentive system had been implemented more at the college than at the departmental level although at least one college was in the process of developing a parallel, College Incentive Plan, which would include thesis students, doctorates produced, quality rankings, and grant monies for determining budget allocations.

Problems identified by department heads were similar to those identified at Forest State. Despite an incentive system aimed at encouraging instructional productivity, University enrollments were declining, and competition for the declining numbers had developed among colleges and departments, leading to an internal redistribution of students. Units worked politically to change general education requirements so that they could attract more students, and they reduced or eliminated difficult prerequisites for their degree programs. Again, the professional schools were said to be winning the competition by employing such strategies as hiring part-time faculty to teach language and programming courses that in the past would have been offered in Arts and Science.

As at Forest State, the central administration was encouraging departments to develop closer ties with the private sector and to pursue entrepreneurial research opportunities. In both cases there were virtually no reports of collective efforts to engage in entrepreneurial research. Perhaps the RCM incentives dissipated most of the entrepreneurial energy. Or perhaps such efforts only involved individuals.

Again, while there were clear incentives to be found in the RCM model, few departments displayed strategic efforts to position themselves favorably in the new resource allocation environment. Although units appeared aware that hard economic times were at hand, they did not demonstrate a sense of how to organize collectively to replace threatened or reduced state revenues.

Park State University

Department heads at this institution cited University strategic planning and budget reallocation efforts as well as State Board of Regents' interventions in faculty workload and undergraduate instruction; however, heads indicated that reallocation efforts largely were ineffective. In one sense entrepreneurial activities seemed to be similar to those at the other universities – extant but limited in the area of initiatives aimed at commercializing research, more evident in instructional areas. In sum at Park State, and elsewhere, we found a relative disconnect between the incentive structures of central administration and the entrepreneurial initiatives of the departments.

Several years prior to our visit to the campus, Park State had engaged in a university-wide review of academic and support units. In result, *ad hoc* faculty committees were asked to identify and reallocate resources to “strong” departments. There was no particular focus on entrepreneurial research or on instructional productivity at the undergraduate level. Instead, the focus was more on enhancing the University's position in national academic rankings. Afterward, the consensus was that despite the extraordinary amount of time and effort invested in the necessary review activity, little systematic resource reallocation had occurred. Rather, there was a sense that allocation was driven more by private “deals” than by public deliberations and established criteria. In the eyes of most, University efforts had been sporadic, which they tied to turnover among senior administrators.

Department heads spoke as much about the ventures of the State Board of Regents as they did about university initiatives. As at Eastern State (below), a State-level body had applied direct pressure on the University to increase faculty course loads, particularly at the undergraduate level; however, Park State University had not responded to this State intervention, either systematically or effectively.

Despite rather negative perceptions by department heads, we found a pattern of modest entrepreneurial initiatives similar to that found in universities that had implemented RCM; that is, we found some evidence of initiatives to link University research more closely to the private sector, but less than our theory had promised. We also found some evidence of initiatives in the area of undergraduate education, of revising undergraduate programs and courses to make them more attractive to students and to make them

more technology intensive. Finally, we found some initiatives to develop masters-degree programs that would both attract students from the private sector and provide businesses with skilled employees.

Prairie State University

From the department heads' perspective, the primary institutional strategy introduced in this University in the name of effectiveness and efficiency was a 4% reallocation of departmental funds. For reasons that we only partially came to understand, the heads at Prairie State reacted less negatively to this 4% reallocation than did their counterparts at another university where the reallocation was only 1%. Several possible explanations surfaced in our interviews. The head of a meteorology department pointed out that reallocations had been commonplace for several years in the University; he commented that "the new reallocation probably w[ould] have little effect in this department". A Life Science department head clarified that the Chancellor pushed for only a 1% reallocation and that it was the deans who had increased the figure to 4%. Perhaps the fact that three-quarters of the money could stay within the heads' colleges was a major plus to the heads. Another head, from an Engineering department, characterized the reallocations as "nothing substantial", and the head of a Physical Science unit observed that the reallocations were to the "signature science programs", which he believed was a good thing. A head from the Mathematics area said that in his field the reallocations were "coming, but not here yet".

Criticism of the reallocation was strongest in the Social Sciences, which often viewed it as unfair – as a "deck stacked against us", in the words of one head. There were also several criticisms about the process and about the implicit costs. As the head of a combination Life Sciences and Engineering department said, "The money is going to process, not enhancement".

Two other Prairie State initiatives were cited by at least two heads. Several heads objected to the enhancing of a University branch campus located in the major metropolitan center of the State. "This takes money out of the system", complained a Life Science head. Niching, the concentrating of departmental efforts in the area "where we can be the best in the world" (Physics and Astronomy head), was also cited as an institutional, finance-related strategy.

Mountain State University

The overriding institutional initiative at this institution was this same "niching"; however, the consequences at Mountain State were seen as much greater than were those from the 4% reallocations or the niching at Prairie State. What was unclear was whether it was the particular intervention or the implementation tactics that largely explained the difference. Representative

reactions to niching were, “A good idea that went too far” (a head from a department in the Math area), “It’s crazy; it drains faculty and administration time” (a head from a Physical Science department), and “There’s a dissonance between the assigned niche and the department’s strengths” (a Social Science head).

In spite of the strong feelings expressed, niching did not appear to be having a major effect on most departments at Mountain State. As put by a Life Science head, “We are doing our own thing and doing it successfully; the University environment is not much of a factor”. Intimating that University leaders were not very skillful in deploying or choosing financial interventions, a Physical Science department head observed that “The central administration controls the money but does not employ resources in ways that matter that much, such as RCM”.

Timber State University

The major finding at Timber State was clear cut: there was much concern about the upcoming implementation of Responsibility Centered Budgeting (RCB), which was to be driven heavily by enrollment changes. Whether viewed positively or negatively, clearly the opinion at Timber State was that RCB would change departmental behaviors in major ways. We wondered whether the effects possibly could be as great as those anticipated by Timber State department heads.

The heads’ expectations ranged from fairly positive, through neutral or undecided, on to very negative. The head of an Engineering department said that RCB was “not intrinsically bad; it has some pluses”. “The trick will be to balance teaching loads and the associated money with the money from research grants”; reflected a Physical Science department head. Another Physical Science head, whose views were mixed, concluded that RCB would yield more rational budgeting and would help meet infrastructure costs. In contrast he also believed that “the professional schools w[ould] be helped and the liberal arts hurt”. He thought that research emphases would change “from theoretical to experimental”, and he stated his “fear that we are substituting algorithms for wisdom, with RCB”. Another head, from a Life Science department, believed that interdepartmental cooperation would be hurt, that “the model [had] been interdepartmental cooperation, and now would become competition.” “This is terrible for higher education”, he lamented.

Lake State University

Lake State was the university where reactions were more negative to a 1% budget reallocation than they had been to the 4% reallocation at Prairie State. Perhaps a contributing factor was that the 1% had come to be labeled a

“takeback” whereas the term, “reallocation”, had been used at Prairie State. Another reason may have been the Lake State President’s business background, which resulted in the interventions he imposed being characterized by faculty members and heads as “simply business practices” – hardly a positive recommendation in a university community. As at Prairie State, there were complaints about the paperwork and the bureaucracy, but in greater numbers and with greater vehemence. The head of an Engineering department maintained that “management [was] the new role of the faculty”. The most serious and consistent complaint, however, was that the 1% was a great financial burden to the departments. According to the heads, no departmental funds were protected at Lake State; the cuts had to come largely from already stressed operations budgets. This “drops operations by \$10K per year”, said one head, who pointed out that most unit costs were fixed (e.g. salaries) there was little real choice about where the cuts could be made. There were a few positive comments about the takebacks, or at least some relatively neutral ones. “We are more autonomous, but still have to be accountable to those who provide the dollars”, remarked a Life Science department head in a statement that literally *defined* resource dependency. “We got it back for [increased] enrollments”, said a Physical Science department head explaining how the 1% money could be regained. Perhaps not realizing the full implications of his statement, a department head in an economics area complained by saying, “There is no way to cut this much, so you hustle that much more for dollars”. A Mathematics area head cited also the negative and interacting consequences of the University guaranteeing tuition prices be held at a certain level for a given number of years, a policy he saw as having a cumulative, dilatory effect when coupled with the 1% takeback. Another Mathematics area head summed up the prevailing sentiment at Lake State when he said, “the market economy prevails on campus”.

Eastern State University

Department heads at Eastern State spoke most often about a University-wide graduate program review. Conducted by a blue ribbon, *ad hoc*, academic committee that rated each academic unit on a five-point scale, the reviews were aimed at identifying centers of excellence to be targeted for a 1% budget reallocation. The process was unique among our sample in its overriding focus on traditional measures of research excellence: the explicit goal was to advance the institution’s position in national research rankings by investing in no more than 10-12% of the university’s *graduate* programs. This focus was not directly either the entrepreneurial research emphasis that we had expected or the undergraduate instructional productivity strategy that we usually found in other institutions.

The push for increased accountability and productivity in *undergraduate* instruction came directly from the State. There were State audits of individual departments, based on a standard State teaching load that essentially required a significant increase in teaching for some faculty, particularly those who were not research active.

The University also encouraged faculty to engage more in commercial entrepreneurial research although, again, response by departments was limited. Instead, many departments were taking advantage of the University's geographical location by tapping into public sector opportunities.

Whereas a few department heads were supportive of the institution's reallocation efforts, more were critical, even those from units faring well in the process. There was a sense that the University was avoiding difficult choices, that departments and faculty simply were being asked to do more of everything as resources declined. One Life Science head reported that his area was under enormous pressure to teach more students because overall University enrollments had declined and his college was the only one experiencing enrollment growth. He criticized the central administration and the graduate program review process and indicated that he did not anticipate any substantial reallocation to take place because of the pending departure of the Provost. Even so, he stated that despite the Life Sciences' mediocre ranking it was targeted by the strategic plan for enhancement. Heads in two other favored units spoke of the adverse effects the central administration's activities were having even on good departments.

Mineral State University

At Mineral State a 0.9% takeback was identified by department heads as the major, centrally-imposed strategy for enhancing campus effectiveness and efficiency. Although the protests at Mineral State were not as strident nor as numerous as those at Lake State, where the 1% takeback occurred, they were fairly common and were sometimes impassioned. The generally more moderate reactions at Mineral State may have resulted in part from the fact that the takebacks or reallocations were tied to a strategic planning effort, which seemed to have contributed to the legitimacy to the process. Almost certainly, another factor was a tuition surcharge that increased University revenues and thus reduced the sting of the takeback, at least for some departments. On the other hand, a negative aspect of the takeback, was the perception that the money involved would be used for (central) administrative purposes.

Again, the full range of opinions was evident. The head of a Physical Science department referred to the 0.9% as "a big-time sink", and from another Physical Science head we heard, "Nickel and dime reductions every

year are eating us up". More parsimoniously, an Engineering head characterized the entire effort simply as "a failure". Toward the other end of the response continuum, the efforts of central administrators were seen as resulting in "much, much independence" for departments successful in raising new money (a Physical Science head), and an Engineering head reported that even with the takeback his department had "gotten new faculty lines because of [the unit offering] so many service courses". In another realm a head in the Life Sciences stated that the University had been successful in moving its focus from agricultural sciences to life sciences, "where the money is". A head from an applied area of the Social Sciences was pleased with the 0.9% effort, modestly boasting that his unit had "been on the good side of budget reallocation". Another Social Science head reported that his unit had been "strengthened".

Winter State University

Although there were special State intentions to enhance salaries and the productivity of tenured professors at Winter State, special University financial management strategies were not evident. A university wide "data bank" had been created, but was not yet being utilized in decision-making, according to the department heads. Also, some selective resource allocations had been made to a few departments that had increased enrollments; these appeared to have been more *ad hoc* than systematic. The most representative response to our question about University financial initiatives was from the head who reported "nothing significant".

Breadbasket State University

As was true at Timber State University, the *anticipated* deployment of RCB was the most discussed financial management issue among Breadbasket State department heads. Although the euphemism used on campus was "budget reform", most everyone knew that RCB was to be applied. As at Timber State University, anxiety levels were very high, and the usual range of views was found. "RCB substitutes dollars for judgment", lamented a department head in a Math area. "Is RCB a hoax? We don't have control of costs, what with unions and [with] so many [fixed] costs, so it's a joke!" – this from an Engineering department head. And from another Math-area head: "Resources will not change with enrollments, so how will enrollment swings be handled?" As strong as these reservations were, there were as many statements of guarded optimism. "RCB is coming and with it increased departmental autonomy", said a Life Science head. From an Engineering head: "Funding may not change but we will get a better handle on what departments really cost." He continued, "Productivity will drive dollars" and "Staff differentiation will occur". And there were statements of uncertainty, the

urging of caution. “The implications are not yet clear”, observed a Life Science head. And from a head in the Social Sciences, “RCB will apply to colleges, not departments, and there will be a ‘hold harmless’ clause for five years”. This head was saying that he thought that many worries were overstated or at least premature.

Two other finance-related issues were mentioned secondarily by Breadbasket State department heads. One was a planned billion dollar fund-raising campaign; the other was continual declines in state support. In regard to the latter, testimony was offered in support of Resource Dependency principles when a Social Science department head called the University “Un-American” because “Minority shareholders (that is, the State) call the shots!” He was referring to the high degree of State control compared with the relatively small share of university revenue coming from the State.

Some generalizations

A number of generalizations can be made from our interviews with department heads. First, all but one of the 11 universities were reported to be employing some form of financial incentives, disincentives, or both. The second generalization is a broad one: by a vast margin, heads were more fearful about the incentives than they were positive or optimistic. Both the fears and the tentativeness of the responses may have had to do with the relative newness of many of these initiatives: in some institutions the incentives had not been introduced. No doubt some of the negativism or reservation was normal resistance to change or fear of the unknown. Some department heads had adopted a wait and see attitude. Even where already employed, in some cases the initiatives had not been in place for more than one budget cycle. Others pointed to the turnover of deans, provosts, and presidents and the related effect on the initiatives: If the administrator who had established the initiative was departing, the future of the initiative was unclear. Regardless, in fact most of the strategies employed by central administrators were perceived by heads as not having a great deal of effect on departments, other than in creating burdensome record keeping. As we listened to the frequent complaints and fewer praises of the interventions, we usually could not separate out the (alleged) effects of the intervention from the head’s personal values, reactions to the additional work involved, perceived threats to the “nature of the university”, or perceptions of changes in departmental autonomy.

A third generalization was that most responses were more negative than they were positive. The fourth was that heads’ negative reactions resulted primarily from what one head described as the “wasted effort and bureaucratic paperwork” that these interventions required. There were statements about extraordinary investments of time for the limited benefits

that *might* accrue. Other causes were the perception that the head's department wound up a "loser" as a result of the resource reallocation process and that there were important negative, unintended consequences from the interventions. The minority of heads, those who were favorably disposed toward the intervention strategies, cited as their reasons the gaining of resources and occasionally the inherent merits of the interventions when judged on effectiveness and efficiency grounds. Another generalization was that the greatest negative response from heads was to the *planned* not the realized implementation of Responsibility Centered Budgeting (RCB).

Finally, it appeared that the implementation *strategy* for the intervention was more important than the particular intervention itself. The response to an intervention might have been only slightly negative or even almost neutral in one university and extremely hostile in another institution, even if the magnitude of the intervention in the latter was less than in the former (*e.g.* a larger budget reallocation). It appeared that the perceived legitimacy of the intervention was important to acceptance, as was the political skill with which the intervention was introduced.

Is there any "payoff" to incentives?

In comparison with department heads' views, how do the actual outcomes associated with the incentives compare? In point of fact our econometric results revealed joint effects for the institutional variable on almost all of our measured outcomes.⁶ The (adjusted) descriptive data relating the associated outcomes of incentives in the 11 universities are contained in Table 1. Attention is directed to the (adjusted) mean number of grants and contracts; grants and contracts amounts; and total minutes spent on instruction, research, and service for just two of these universities. These two, Center State University and Forest State University, are singled out because when we conducted our interviews the entrepreneurial environments of these two universities were noted to be substantially different from those of the other nine universities. Pertinent to our theory, Center State was known to have employed RCM, which we had predicted earlier would gradually evolve in the new financial environment (Slaughter and Leslie, 1997). Forest State was located in a state that historically had under-funded higher education substantially *and* had implemented a limited form of RCM. This was the only university clearly judged to be destabilized financially, a necessary condition of resource dependency theory. Of the remaining nine institutions, seven had either implemented some form of university-wide reallocation of funds or were preparing to implement an RCM variation. Moreover, each of these remaining institutions was experiencing (resulting?) relatively moderate financial stress (compared with Forest State University).

Table 1. **Associated outcomes of incentives***

	(1) Adjusted G/C number %	(2) Dev. from adjusted value (%)	(3) Rank	(4) Adjusted G/C amount	(5) Dev. from adjusted value (%)	(6) Rank	(7) Adjusted linstruction and research	(8) Dev. from adjusted value (%)	(9) Rank	(10) Adjusted G/C number	(11) Dev. from adjusted value (%)	(12) Rank
Lake State U	1.92	–1	7	381.56	–2	10	484	–9	9	607	–2	7
Breadbasket State U	1.99	–2	8	431	–19	8	491	–3	7	614	3	4
Timber State U	2.06	15	3	437	–15	7	484	–18	11	608	–25	11
Prairie State U	1.98	4	5	381.36	–6	6	489	1	4	614	0	5
Forest State U	1.61	4	5	316.01	86	1	476	39	1	595	29	1
Mountain State U	1.99	23	1	401.34	–23	9	492	7	2	616	6	2
Mineral State U	2.03	16	2	408.41	21	3	491	–6	8	616	4	3
Center State U	1.84	–36	11	351.28	25	2	478	–2	6	600	–3	9
Winter State U	2.12	–23	10	426.81	21	3	492	3	3	619	–1	6
Park State U	1.87	–1	7	375.57	7	5	487	–9	9	609	–13	10
Eastern State U	1.98	–4	9	399.9	–29	11	490	0	5	614	–2	7

* Adjusted values and deviations from adjusted values in number of grants and contracts; grants and contracts amounts; total minutes spent on instruction, research, and service; probability of departments' substituting self-generated revenue for state funded activities; and probability of substantial departmental revenue change in the past five years.

Calculation of adjusted value : Given the fact that the distribution of SME (Science [including Social Science], Math, and Engineering) departments and faculty members is not the same across the 11 universities, direct comparison of their absolute value may be problematic. For example, if University A has more Engineering faculty members interviewed than University B, we would expect that A generates more grant and contract money than B since Engineering faculty generally generate more grant and contract money than those in other fields. In order to calculate the adjusted value, we first calculate the average values of an outcome variable in each SME field across the 11 universities and the distribution of the SME departments and faculty members in each university. Then, the average values are weighted by the distribution of SME departments and faculty members to generate the table of adjusted values.

Source: Author.

To illustrate the data in Table 1, observe that whereas Center State University ranks last in the mean number of grants/contracts received per faculty member, it ranks second in the mean amount of grant/contract money received. Similarly, Forest State University, which is fifth in the mean number of grants/contracts is first on the dollar comparison. In time devoted by faculty members to Instruction and Research, Center State University is sixth; Forest State University is first. The Forest State University case, in particular, seems to suggest a resource dependency effect: Major revenue problems are associated with relatively successful efforts in generating external funds from grants and contracts.

Conclusion

There can be little doubt that declining revenue shares from government block grants is having major impacts on HEIs. The magnitude and nature of these impacts, however, is enormously varied, not only across HEIs but within as well. Some institutions are favorably positioned to compete in various funding arenas, whether it be for contracts with business and industry, competitive government grants, royalties and licensing revenues, endowment contributions, or perhaps most notably new tuition revenues. Others are less fortunate. Within institutions, shifts in activities, as reflected in expenditure allocations across functions, substantially alter institutional directions. Internal academic units are impacted importantly in numerous ways; however, these units appear to adjust dynamically to changing revenues in maintaining their traditional teaching responsibilities. The individual staff member experiences substantial changes in his or her academic life, often working longer hours to satisfy increasing productivity expectations.

The internal institutional effects of shifting revenue structures depend upon many factors, including the extent to which and the manner by which the institution transmits environmental pressures to internal units and individual staff members. Some incentive structures appear to “get results”; others seem to achieve very little. The specific incentive selected may be less important than the skill with which it is administered.

Incentives and other policy devices aimed at improving institutional performance have been around for a very long time. RRPM, ZBB, MBO, OR, and TQM are merely the first of the many acronyms that come to mind, not to mention strategies such as Strategic Planning and Systems Analysis. Having followed this literature for almost 40 years, my sense is that very few of these interventions have made even very modest improvements in HEIs. Of all the devices employed, only RCM/RCB seems to me theoretically and in practice to result in important, if not altogether positive, changes. In my opinion RCM/RCB is the only approach conceived to date that truly *can* offer academic units and

individuals substantial incentives to perform their tasks better. Whether that potential is achieved depends upon many factors, such as the unit's field, the degree to which financial responsibility is assigned to the functional organisational unit, and the unique culture and makeup of the unit.

Whether the overall effects of changing revenue patterns and the incentives employed subsequently by HEIS are positive is largely a matter of personal values. Some will view the same outcomes as beneficial, others as detrimental. There can be little doubt, however, that, good or bad, incentives will be with us for some time.

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Notes

1. Slaughter, S.A. and Leslie, L.L. (1997), *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*, Johns Hopkins University Press, Baltimore, MD.
2. The book develops the theory behind these changes. Emphasized were resource dependency and theories of professionalization.
3. NSF Grant Number 9628325. The Government has certain rights in this material. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.
4. Hasbrouck also found evidence of modest fungibility or "cross-subsidization," specifically the allocation of money from Gifts, Grants, and Contracts to Instruction.
5. RCM or Responsibility Centered Management, which is sometimes referred to as RCB (R-C Budgeting), in simple (and relative to non-RCM universities) terms, permits units to capture the revenues that they earn (usually net of some institutional tax), such as through student enrollments and research grants, but requires the units to cover their costs with these revenues. In reality virtually all approaches to RCM/B extant in US public universities allocate resources only in some marginal manner; that is only certain, new or additional resources are so allocated.
6. This means only that some unidentified characteristics of the HEIs in the sample resulted in varying outcomes. One of these characteristics may have been the incentives utilized.

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University Roles and Career Paths: Trends, Scenarios and Motivational Challenges

by

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The substantial pressures upon higher education systems and institutions are impacting upon individual roles and career paths. Yet recent research on academic identities (Henkel, 2000) suggests the responses are largely adaptive and evolutionary. This article starts by briefly revisiting some of the key aspects of the study by Kogan, Moses and El-Khawas (1994), and the paper by Gordon (1997), before turning to a short discussion of the principal trends which have affected the scene subsequently. It then explores three scenarios in terms of roles and career paths: evolution, selective restructuring, and step-change restructuring. The possible characteristics and implications for various stakeholders of each are considered, as is the connection to current trends, and indicators of change. The paper concludes with suggestions as to how institutions and systems might strategically plan for, and manage, changes in roles and career paths in order to ensure that individuals are motivated and perceive the changes positively and creatively.

Introduction

Kogan, Moses and El-Khawas (1994) reported on the IMHE Project on Policies for Academic Staffing in Higher Education in a volume which covered: Staffing as a Policy Issue, The Changing Framework for the Academic Profession, Changes in Task, Staffing Structures in Response to New Demands, Qualifications and Staff Development, Staffing and Demography, Conditions of Service, and Policy Conclusions.

They highlight the shift to mass higher education, the closer linkages between higher education and the health of regional and national economies, the growing influence of managerial and market components in governance and the impact of external accountability as key facets of the changing framework.

“There are changing balances and tensions between different tasks: teaching, scholarship, research, consultancy, community service and administration. Priorities have to be made between them, by academics and institutions. Differentiation of task is taking place between institutions and within them.” (Kogan, Moses and El-Khawas, 1994, p. 2)

They advocated the development of a new academic mandate, as a means of explicitly marrying traditional scholarly values with the changing demands of students, societies and economies. Coherence and accountability would be served by ensuring that the mandate was observable, disciplined and public. Staffing structures were diversifying, notably through greater use of part-time appointments, greater specialisation within full-time appointments and increased demands upon academic managers and leaders. They highlighted a number of associated tensions involving status, reward, motivation and opportunity.

They noted the pressure of qualifications for entry into academia and for preparation for the teaching role but urged more systematic planning of staff development and more thorough preparation for the changing role in teaching.

“Faculty should be regarded as a national resource. Institutions should be thought of as knowledge and skills banks within which core staff will sustain continuity and leadership in research and teaching. They will attract able people who will take up subsequent careers in the many

other occupations depending on disciplined enquiry.” (Kogan, Moses and El-Khawas, 1994, p. 6)

On conditions of service, they highlighted frustrations over reward, workload, conditions and opportunities, noting that gender issues continued to need action in terms of policy and practice.

The eight policy conclusions were directed respectively, at governments, institutions and academics. Whilst they argued that governments should leave the control of academic work to institutions, indeed to the collegium, they simultaneously sought strengthened governmental capability to analyse the changing nature of, and needs for, academic staffing and for smoothing fluctuations to avoid the danger of short-term actions, such as the use of temporary contracts, subverting longer-term strategies and policies.

Collaborative responses were sought on initial training and staff development,

“differentiated to meet the changing and widening needs of students and of the larger range of tasks to be undertaken by faculty.” (Kogan, Moses and El-Khawas, 1994, p. 8)

Within institutions strategies advocated included: viewing the issues as both professional and managerial; creating explicit staffing policies and plans; modelling different patterns of work; ensuring the provision of adequate, professionally-led staff development; and fostering the means whereby individuals considered, set and met individual and collective objectives.

Within that rich and multi-stranded analysis of evolution and change, the authors considered that the

“core functions of academic staff are teaching and research complemented by service to the institution, to the professions, and to society.” (p. 70)

Examining the preparation and development of academics for the needs of mass tertiary education, Gordon (1997) touched upon: the roles of academics, prospects and challenges, academics as managers, academics as teachers, academics as researchers/scholars, and academics in the service role. In the concluding remarks, an argument was advanced for viewing such preparation and development as

“a professional obligation, part of the responsibility that academics owe to their various clients, as well as to their employers, their disciplines, professional or learned associations and to the funders of higher education.” (Gordon, 1997, p. 75)

Academics can be expected to perform many roles and functions.

“The roles of academics are numerous, for each function can spawn a number of roles. Whilst not every academic will perform every role, nor

are these constant, equally weighted or universal, the following extensive but not exhaustive list gives an indication of the range of roles performed by academic: teacher, scholar, practitioner, demonstrator, writer, model, discoverer, inventor, investigator, designer, architect, explorer, expert, learner, developer, collaborator, transformer, facilitator, enabler, evaluator, critic, assessor, setter, guide, colleague, supervisor, mentor, listener, advisor, coach, counsellor, negotiator, mediator, juggler, manager, leader, entrepreneur.” (Gordon, 1997, pp. 67-68)

The ensuing discussion and analysis in this paper will endeavour to heed the salutary advice offered by Cuthbert (1996, p. 4):

“Thus, when we consider the staff experience of working in higher education, we confront a mixture of unduly familiar and unduly strange perspectives, which combine to tell us less than they claim, and less than we should know. Multiple perspectives clamour for attention. Synthesis would be reductionist, illusory or overweeningly ambitious... But that should not be an excuse for a lack of an attempt to make sense.”

Trends and prospects

Henkel (2000) reporting on in-depth interviews with a small sample of academics, concluded that, despite the widespread and powerful policy change which has affected the British higher education system, to date academics had largely responded in an adaptive, evolutionary manner, retaining core components of personal professional identity in relation to their roles in teaching and research. Moreover, it appeared that a third dimension to identity, that of academic manager, was, at most, in an embryonic, although possibly emerging, stage.

That research was part of a wider comparative study of the changing relationships between higher education institutions and government in England, Norway and Sweden (Kogan *et al.*, 2000). In that study Høstaker analysed the relationships between policy change and the academic profession. In spite of inter-system differences, Høstaker noted that reform policies impacted differently, some groups benefited, other did not. Likewise, the three systems did not share similar trends in terms of a division of functions, and ranking of functional importance between teaching and research. This, in turn, created different academic environments and experiences. Common experiences included:

“graduate education, academic trajectories and accountability in universities. One of the strongest forces of standardisation in the UK seemed to be the RAE (Research Assessment Exercise), which has come to define the rhythm of much academic life. The importance of such standardisation is that it may provide common points of identification

for academics. In order to be able to state what an academic profession is, one must start with those common markers connected to common experience. Perhaps the definition of an academic is just this heterogeneous collection of points of identification. This may be a strange profession in the view of professional theory, but it leaves us with more than a nonentity.” (Høstaker, p. 156)

Several interesting issues emerge from the foregoing studies. Firstly, national systems can set powerful policy contexts which influence both institutional responses and academic experiences. Secondly, whilst these contexts are fluid, although often subject to the same macro-forces, systems are at different points of evolution and change can, and often does, differ in pace and emphasis. There are important inter-system variations in the relative influence of institutional and more localised (discipline or departmental) factors in shaping changes to academic roles, career paths and experiences. These deductions may be slightly less apposite for administrative roles, where there is a stronger expectation that a major purpose is to serve the needs of the institution professionally. However, the continuing trends towards diversification, fractionalisation, specialisation and differentiation of administrative functions has complicated the scene, in the process posing new challenges over career paths. Thirdly, different actors or stakeholders may legitimately hold different perceptions of issues and of change, a situation further complicated by the impact of the dominant focus, *e.g.* external or internal, macro or micro scale.

At the macro-scale, several trends are recurrently identified, including:

- the need for, and implications of, widening participation and the link to citizenship and social inclusion;
- the expectation that higher education is the crucial source of future knowledge workers;
- the growing expectation that research should not only create knowledge but also directly foster innovation, development and economic growth (regional and national) and the desire to strengthen the linkages through the commercialisation of research-generated knowledge;
- the complex implications of globalisation and of the potentialities of borderless education (CVCP, 2000) and of lifelong learning.

Whilst not voiced as openly as in the 1990s, the external strictures of efficiency, economy, effectiveness and accountability continue to affect overall systems, institutional management and the working conditions of individual members of staff.

Whilst prediction is a precarious art, forecasting broad directions is less problematic than sceptics might assume. For example, Watson (2000, pp. 31-32)

reflects upon the outcomes of seven challenges which Lockwood and Davies (1985, pp. 1-23) identified for higher education in the United Kingdom in the mid 1980s. He concluded that one challenge had proven incorrect, expansion had occurred rather than the predicted contraction, two had mixed outcomes and four had proven accurate. The latter included: the growth of uncertainty, the need to become more efficient, to create and maintain flexibility, and to manage change without damaging staff morale. Another UK example is provided by the six strategic concerns which Williams and Fry (1994) highlighted in their forecast for British higher education to 2004:

- institutional diversity and differentiation;
- graduate employment;
- qualifications and the organisation of teaching and learning;
- opportunities offered by new technologies;
- increasing income from the private sector;
- staff recruitment.

These are, of course, broad headings and so each covers a range of issues, developments and sub-scenarios. On a similar timescale Gordon (1995) explored the possible implications of six areas, namely: demand, funding, new technologies, external competition, research assessment, and the standards and purposes of higher education. That study has been updated (Gordon, 2002), as part of a revised set of scenarios for the next decade.

Without wanting to appear parochial, many of the views and challenges expressed in a current consultation in Scotland (*Shaping Our Future*, Scottish Higher Education Review: Second Consultation Paper, Scottish Executive, 2002) are illuminating and pertinent to the topic under discussion. Four illustrative quotations will suffice.

“... while there are striking examples of institutions working together to expand the range of learning available to their students, collaboration in teaching remains an area where there is potential to do more.” (p. 18)

“With economic pressures to extend rather than reduce the length of time in the labour force, it can be expected that demand for continuous professional development (CPD) will increase. HEI’s are likely to be confronted with new types of students seeking new skills, requiring new pedagogies and with new demands, for how and when and where courses are presented.” (p. 19)

“Many staff of HE institutions already work long hours and chose careers to pursue interesting questions knowingly foregoing high salaries. Those who generate ideas are not always those who are best placed to create and sustain businesses.” (p. 24)

“As centres for the development of human capital, there is a costly irony that there is no deeply embedded culture of training staff for their changing roles. The assumption too often seems to have been that academic staff have no need to learn new techniques and technologies as their jobs change. In recent years there has been more training for top-level academic managers and this is to be welcomed. But this approach is only slowly permeating down to faculties and, at departmental level where innovation and change in HEI’s really takes place, there appears to be relatively low levels of systematic training and little requirement for formal management competencies for those who run departments. Young academics can be given enormous responsibilities without any significant prior training.” (p. 26)

Scenarios

Williams and Fry (1994, p. 48) posited that by 2004 core academics would lead teaching, create and facilitate learning materials using new technologies and form

“the nodes of networks of part-time and occasional staff rather in the way that many management consultants operate today.”

Elements of that scenario have emerged in several systems. Academic as teachers are being urged to embrace the use of new technologies. In most systems they are also confronted with shifts in student demands, arising from changes to the profile of the student population and associated experiences, aspirations and expectations. For example a growing number of students do not study on a full-time basis. Similarly, substantial numbers have part-time jobs, which can question assumptions about the time available for out-of-class study and the scale and nature of independent learning.

Prevailing views of appropriate pedagogical approaches are also changing, with greater attention to student-centred learning, and to active engagement in the learning process.

Many academics have developed their teaching practice through a combination of personal experience, (modelling), and cautious experimentation, often powerfully contextualised by the norms, mores and traditions of their discipline. In a minority of situations, institutions impact profoundly upon practice. A much larger number seek to do so through learning and teaching strategies, encouragement of innovation, and the provision for training and staff development.

Scenario 1: Changes to teaching roles

My first scenario spans a bundle of sources for change in the teaching role of academics including: the implications of widening participation and of

serving the diverse needs of learners; effectively using new technologies to enhance learning and teaching; the initial preparation and continuing development of academics for their developing roles as a “teacher”, which could entail redefining the meaning of the term; and establishing and using suitable means of evaluating and benchmarking the effectiveness of practice.

Put simply, what will it mean to be a teacher in higher education? What skills will be needed? How will they be developed? Who decides what skills are needed? How should staff be supported in the role? Are they primarily educators or managers of learning? Experts or facilitators?

Few would question the need for a scholarly approach to teaching but there is less consensus over the need for all academics to pursue research into pedagogy although support for an expectation of involvement in pedagogical development (Gordon *et al.*, 2001). In some systems institutional differentiation either exists, or is emerging, which distinguishes between a research-led focus and a primarily teaching-led orientation. If that broad description has some validity, then it would also be a source for change within this scenario.

Henkel’s (2000) research demonstrates that much of this scenario touches sensitively upon a core component of academic identity. Recurrent attractions of academic work include the sense of usefulness, of pursuing interesting questions and challenges and of a strong personal influence over detailed choices, setting agendas and selecting practices.

Thus, individuals tend to favour self-motivated innovation and change. In these circumstances they can readily become frustrated if the institution fails to provide what they expect in terms of support and recognition. Institutions may struggle to meet such fractionalised and diverse demands and expectations, especially if it involves technological infrastructure or dedicated support such as the creation of learning materials. Providing sharp strategic direction from the top-down can also pose operational difficulties, which largely surround issues of ownership and disputes over appropriateness, relevance and, even, acknowledged expertise. Yet external pressures, notably for quality assurance and from legislation, increasingly require explicit means of reconciling these tensions, of connecting individual, departmental and institutional practices and approaches to clearly defined policies and strategies.

The available evidence indicates that academics continue to view themselves as having complexly connected identities such as researcher teachers or teacher scholars. Just as they retain these identities when performing clearly specified roles as academic manager, in a similar manner many of them can preserve identity even when adopting different approaches to teaching and learning. In other words they may indeed facilitate learning

and manage co-teachers and students, without necessarily modifying in substance their deeply-held academic identity.

An additional complicating factor is that excellence in teaching is still perceived as attracting less prestige and reward than excellence in research, notwithstanding the endeavours of many institutions to revise their criteria for promotion and to use funding to support teaching innovations and changes to practices.

The foregoing points suggest that in this scenario widespread changes to roles and career paths are likely to require significant shifts in prevailing cultures and values. External agencies often use steering strategies, including earmarked funding. Earlier in this article quotations were taken from a consultation paper issued by the Scottish Executive. They illustrated amply the role which ministers can play in setting the climate and steering the direction, nature and pace of change, either directly or via a buffer body such as a funding council.

Currently multiple approaches are taken to cultural change, largely as a recognition of the complex and diverse reality that is found in most systems of higher education, *e.g.* work with disciplines on initiatives, work with institutions on policies and strategies, offer innovative opportunities to individual academics, and provide unifying and enabling infrastructural support and frameworks. Within that structure the emphasis and balance can be altered to address weaknesses and to handle emerging priorities. An example would be increasing the steer for coherence, connectivity and effectiveness and specifically linking funding to satisfactory progress in meeting those requirements.

Within many institutions, there is growing concern over the scale of demands placed upon academic staff. One response has been to create dedicated services to produce high quality teaching and learning materials, sparing academic staff of the need to devote time to such tasks and of acquiring the necessary technical capabilities. However that strategy does depend upon close dialogue over academic intentions (learning outcomes) and academic nuances. It may also prove problematic to finance scaling up to meet the demands if all academics become extensive users. It also depends upon academics releasing personal control over the activity.

Some of the other unresolved challenges in this scenario are: should roles and responsibilities rotate or should specialisation be encouraged? What are the consequences of either strategy for career paths and staff development?

Whilst the Institute for Learning and Teaching in the United Kingdom has defined professional practice in teaching and learning and has accredited over 100 programmes and recruited some 10 000 individuals as satisfying the standard the topic is still a matter of some debate within the United Kingdom.

Apparently the academy remains unconvinced of the need for, or appropriateness of, standards and explicit criteria to frame and guide developmental provision, support career pathways and progression and shape understandings of good practice.

Scenario 2: Greater role differentiation

Within administrative and academic service roles differentiation has been emerging. Indeed a substantial number of modern named roles did not exist thirty years ago. In the academic domain, role differentiation occurs and is increasing, albeit from a modest base. This tends to take various forms. There is the differentiation which results from particular roles being handled in specific contractual arrangements, *e.g.* adjuncts or tutors in areas of professional practice. More widely it can embrace other research, teaching or service roles which are typically undertaken by non-tenured staff, *e.g.* research assistants, research fellows, and teaching assistants. Specialisation within academic specialisms is, of course, an established trait.

The trend towards specialisation and fragmentation fuels role differentiation, as does the emergence of new fields of activity to address emerging needs, challenges, knowledge, and opportunities, *e.g.* the array of roles in supporting staff development or student development or the use of new technologies in teaching, learning, research and administration.

Different dimensions of greater role differentiation arise if existing roles are disaggregated such as the separation of research and teaching or if new roles are added to existing ones, *e.g.* commercialisation to knowledge creation, entrepreneurialism to scholarship, or management to research and teaching.

Benefits from specialisation and differentiation include making the best use of expertise, accessing individual motivation, serving needs and promoting efficiency and effectiveness. However when taken to excess there can also be dangers of territorialism, fragmentation, isolation, inefficiencies. Long before that state is reached other issues can emerge such as those posed by changing needs, priorities or circumstances.

A different manifestation of greater role differentiation arises when individuals are allowed, even encouraged, to reshape or reduce what was previously a composite bundle of roles. Perhaps the most challenging example currently affects what many assume to be the classic threefold macro-functions of an academic (research, teaching and administration). Many, probably most, institutions allow some latitude in the weighting of these roles, in terms of workload, performance and criteria for reward and recognition. That is perceived, understandably, as both motivational and realistic, and as a means of fruitfully aligning expertise and performance. However the next stage can be more challenging, namely when one role is reduced to a very

minor component or indeed dropped. Here financial matters can influence strategy, notably research income. Thus outstanding researchers are permitted to “buy out” teaching and/or administrative duties in order to maximise their research productivity. Since excellence in research frequently features prominently in the criteria for promotion and reward such a strategy rarely presents problems for the career paths of successful researchers, however, it does affect both the roles and career paths of others who do the replacement duties in teaching and/or research in ways that have been extensively documented.

In some instances more negative connotations can surround this differentiation. For example in seeking to optimise the performance of areas submitted in the most recent (2001) Research Assessment Exercise in the United Kingdom, many institutions omitted a number (sometimes a substantial proportion) of academic staff, because it was anticipated that their work would not be adjudged to meet the level which the institution sought in that unit of assessment (discipline). In effect, they were categorised as not having a significant research role. Since funding is directly associated with the peer panel decisions about the quality of research submitted, those omitted attract no funding for research. Perhaps inevitably when institutions find themselves strapped for resources, that scenario readily translates into additional teaching duties and/or administrative load, possibly also with managerial encouragement to generate external income for the department through consultancy, externally-funded courses or other entrepreneurial activities. These actions are entirely understandable but they are based upon different arguments for role differentiation. It is not that those individuals necessarily excel in teaching or entrepreneurship, their role differentiation primarily ensues from a perceived weakness. Inevitably such decisions raise issues over motivation and the implications for career paths.

The personal consequences of the need for a specialist role waning, even disappearing, should not be underestimated. Commonplace causes are technological or organisational change and changing priorities, notably in the research topics which are attracting funding or in methodologies which are in favour.

Scenario 3: Blurring boundaries

This scenario can also take several forms. Here three aspects are discussed briefly. Firstly, there are the complex challenges entailed in the Mode 2 debate (Gibbons *et al.*; 1994). If a significant and increasing amount of new research and knowledge is produced by fluid multi-discipline teams, there is the probability that, over time, disciplinary boundaries are blurred. Of course, sometimes new disciplines emerge between the interstices. They become new specialisms and the pioneers can shift their career path across

the boundary. But at least some members of Mode 2 teams can function in a different way, in effect as specialist consultants who bring particular skills and expertise to each project they work on. Moreover many of these projects will not be located within the academic heartland of their own discipline. If the projects are exciting and successful, the attraction of involvement is apparent. Funding, output and reputation can readily follow. However the individual can be viewed suspiciously by the “traditional” disciplines. On occasion, that can impede career progression. Whilst institutions often find ways around such obstacles, it is more difficult to “normalise” this type of career path. Yet in an era where new forms of knowledge production, dissemination and evaluation are developing rapidly, there is considerable potential for substantial disturbance to the prevailing “model” of academic career paths, doubtless preceded by a phase of turbulence and challenge to existing parameters, presumptions and perceptions. Accommodating innovators and pioneers is a long-standing test for institutions but the scale, pace and nature of potential change in the next decade is likely both to escalate the magnitude of that task and further refine the rules of peer approval within the collegium. Institutional managers and academic peers may face a step-change within a decade.

Secondly, blurring is occurring around roles in teaching and learning, partly due to the use of new technologies and also as approaches become learner-centred and greater emphasis is placed upon the acquisition and application of skills in addition to subject knowledge – what can largely be encapsulated as dealing with the demands of learning to learn. Here the transgressions may cross the academic/academic service divide with the ensuing complications of currently separated career trajectories, gradings and even systems of reward and esteem.

Thirdly, much more widespread blurring may follow as systems, such as the UK in the next few years, adopt single salary spines, with all posts/roles placed by an evaluation of their task complexity and role size and weighting. Of course, any radical changes are likely to take considerable time to develop and, indeed, they are not inevitable outcomes of the process. Moreover the driver surrounds issues of equal pay for equivalent work and responsibility rather than career paths *per se*. Nonetheless current gradings and categories would gradually be dissolved because staff would not be placed solely within the current grading structures. In time the impact upon career paths could be both complex and profound and the managerial challenges are likely to be considerable.

Concluding remarks

Situations change, opportunities arise and roles and career paths evolve. In that sense it is almost a natural process. Yet there may be pitfalls and threats. Apart from concerns associated with uncertainty, with a possible loss of influence or esteem, there can also be disagreement over principles, purposes and values. For example, McInnis (2000) has reported on the perceptions of Australian practitioners that changes in academic roles are in danger of adversely affecting the quality of teaching.

Institutions are experiencing aspects of some, if not all, of the scenarios outlined above. However the perspective taken and approach adopted, may influence the solutions which are pursued. Issues can be framed narrowly or extensively. The focus can be operational or strategic, isolated or connected.

In part the positioning reflects a combination of cultural factors such as styles of leadership and management, institutional strategy, and the relationship to specific targets, objectives and plans. That picture presupposed that institutional managers set and steer the agenda, whereas, in reality, all too often nowadays, they can be forced into reactive mode, both by external pressures and internal incidents, threats and dilemmas. In reactive mode, the emphasis readily switches to fire-fighting, damage-limitation or opportunity-seizing, whilst the time available for robust reflective analysis and widespread thoughtful consultation commonly becomes severely constrained.

A different, but powerful, set of issues surround the way in which issues are viewed. Given the pressures upon institutional resources and performance, managers understandably emphasise tasks and productivity, and associated task-development. These overlap with, but are not identical to, roles and career paths. That vital distinction emerges in conversations with staff about their engagement with the institution and the extent to which they see their development as directly linked to institutional priorities and strategies. Almost invariably individuals approach the topic from a strongly personal orientation, “my roles, my development, my career path”, and find it difficult, if not impossible, to see themselves sharply outlined in institutional plans, strategies and priorities. It is as if at that level they become anonymous, a face in the crowd.

How can this gap be bridged? There do not appear to be easy answers but progress is likely to involve:

- legitimising, valuing and aligning the multiple perspectives;
- promoting active and open dialogue about roles and career paths;
- using the research evidence and encouraging further research on these topics;

- searching for good practice, benchmarking practice, conducting reality tests of policies and practices, and operating a continuing, coherent and comprehensive process of analysis, planning, evaluation and review in the area of roles, career paths, development and reward;
- working towards greater articulation of flexible, relevant and robust development models and appropriate supporting development provision, within a framework of clearer understandings of key professional roles and obligations, what is needed in preparation and continuing development, and how these elements are defined and to what standards they are expected to operate.

The foregoing is not meant to imply that valuable insights have not been generated or activities undertaken. At the level of systems, national staff development agencies increasingly seek to promote and inform debate and practice, to define standards and generate developmental programmes. In the United States for more than a decade the Faculty Roles and Rewards Forum of the American Association for Higher Education has done sterling work on campuses and through its publication and annual conferences. The initial agenda was influenced by the writings of Ernest Boyer (1990) on *Scholarship Reconsidered* but the coverage has extended greatly, although the focus remains exclusively on the work of faculty.

So institutions can source information and studies on good practice. At the institutional level, greater attention is being paid to the development of all staff, over a range of timescales. Alignment between development and strategy has also become a more pressing matter. Thus, the desire is there. A much more challenging issue is deciding whether it is mainly a matter of patience and further application, or whether, as is argued above, the emphasis needs to shift? That could merit further consideration, investigation and substantiation.

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Australian Academics and Prospective Academics: Adjustment to a More Commercial Environment

by

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In many respects, adjustment to the new commercial environment has been painful and damaging to the academic profession in Australia. The profession is now more fragmented and has lost political influence and standing. Academic salaries have failed to keep pace with professional salaries and many academics are highly critical of changes in government higher education policy, reduced government financial support for universities and structural and management changes within their institutions. Many feel a strong sense of frustration, disillusionment and anger. However, not all adjustments have been negative. Australian academics today are better-qualified, work harder and are more productive in research than they were in the 1970s. They continue to be deeply interested in key academic roles and many still find their jobs satisfying. Many have made successful transitions to involvement in research links with industry and other entrepreneurial activities, without jeopardising their academic integrity. But the views of PhD students give cause for concern, especially dissatisfaction about course experience, uncertainty about future careers and highly negative views of both universities and academic employment.

Introduction

This article explores how effectively Australian academics and prospective academics have adjusted to the relatively rapid transition to a decidedly more commercial environment and less funding per student unit. Using social survey and interview data collected over a number of years, the article looks particularly at the professional interests and formal qualifications of academics, and their work patterns, research productivity and satisfaction levels. It explores how academics have adjusted to two key entrepreneurial developments of enhanced research links with industry and entrepreneurial activities within departments. It also considers PhD student course satisfaction, career plans and views of universities and academic employment. Through a better understanding of the adjustment process, it is hoped that both university management and government agencies will be better placed to understand how university staff are motivated and how the academic profession may be energised and rejuvenated.

Over the past decade or so, observers from different countries have pointed to some of the adverse impacts of recent changes in work environment and policy context on academics. For example, Halsey (1992) and Clark (1987) have drawn attention to increased fragmentation of the British and American academic profession, with the upper half of the hierarchy within institutions becoming segregated from the lower half. Shattock (2001) has emphasised the implications of reduced political standing of academics in the United Kingdom and the relative decline of salary levels in relation to other professions. Others have mentioned strong discontent amongst academics and feelings of alienation within their institutions.

The situation in Australia is closely similar to that observed in other developed nations, although some observers consider that Australia's higher education system has moved further than most comparable nations down the path of entrepreneurialism and managerialism. Certainly the Australian higher education system has changed dramatically in a short space of time, forcing changes on the academic profession and career paths for academics. Fragmentation of the profession is noticeable, while the political influence and public standing of academics have declined. Academic salaries have not kept pace with those of other professions and with senior officials in Commonwealth and State public sectors, despite reasonable salary increases achieved through enterprise bargaining since 1996. Many academics today are

highly critical of changes in government policy, reduced government financial support for higher education per student unit, and changes within their institutions. They resent particularly more corporatist styles of university management and less collegial decision-making. As a result of rapid increases in enrolments and falling funding levels, work pressures have increased to a marked extent. Discontent, annoyance and disillusionment have been voiced loudly and publicly by academics in the press and in submissions to a recent Parliamentary Senate inquiry into universities (*Universities in Crisis*, 2001).

Various recent research reports also have drawn attention to how quickly and fundamentally the academic environment has changed in Australia, and to the serious effects on academic life and work. In their study of public research universities in the United States, Australia, the United Kingdom and Canada, Slaughter and Leslie (1997) found that scientists were closely engaged in what they call “academic capitalism”, with universities becoming increasingly involved with the profit motive and market-like behaviour. As a consequence, universities are now involved in academic capitalism, leading to major tensions and contradictions for academics.

While Slaughter and Leslie’s study was mostly concerned with the dependence of universities on external funding, Marginson and Considine (2000) focused on changes that have taken place in university governance and management. Examining 17 Australian universities, they conclude that there is a general pattern of making universities more like business enterprises. Top-down management models and strong executive control have resulted in replacement of collegial decision-making bodies by new managerial structures, in a sharp decline in the role of academic disciplines, and in transfer of authority and budgetary autonomy from central administrations to individual deans of faculties and heads of departments (Marginson and Considine, 2000, pp. 9-11).

Even more worrying are the results of a recent study by Anderson, Johnston and Saha (2003) of academic work roles and staffing in Australian universities. Based on over 2 000 responses to a questionnaire distributed electronically in 12 representative universities, these researchers provide a disturbing picture of academic work and values. While there is now increased interest amongst many academics in improving teaching practice and working more effectively with their students, academics are deeply frustrated by high work loads, increased bureaucracy, and inability to give adequate time to teaching and research. They are greatly concerned about increased use of casual staff for teaching, about declining academic standards, and lack of

support for academic work within their school of department. On academic standards, the authors reported as follows:

“The general perception of academics is that standards are lower than they were 10 or 20 years ago... many also report that a proportion of new students are less able than previously and not well prepared for university study. If they are to succeed, these students require special teaching assistance. There are also many comments, backed up by the overall statistics, that it is easier to pass than it used to be, and that graduation standards have declined.” (Anderson, Johnston and Saha, 2003, pp. 36-37)

On the other hand, the argument of this article is that the picture of gloom presented in the voices of academics and from recent research provides by no means a complete representation of the academic profession today in Australia. Rather, the data presented here demonstrate that not all adjustments to change by academics have been negative. Australian academics today, in fact, are better qualified than they were in the 1970s. They are more interested than ever in the key academic roles of teaching, working with students and research. Unlike the 1970s, few academics have longings to spend more time in administration. Academics today work harder, they are surprisingly more productive in research, overall they find their jobs satisfying, and many of them have no wish to leave university employment. Many too have moved to be involved effectively in entrepreneurial activities. On the other hand, the views and course experiences of current PhD students give cause for concern. Many PhD students are highly critical of their courses and uncertain about future careers, and hold highly negative views about universities and the academic profession.

Unfortunately, to a large extent neither Australian university managers nor government agencies have seriously addressed the implications of the new entrepreneurial environment for the future of academic work and the academic profession. Significantly, neither the West Committee (1997 and 1998) nor the recent *Crossroads* discussion paper (Nelson, 2002) paid any real attention to the implications of the new directions for academic work and the academic profession.

Data for the article come from the following studies conducted by the author or in which the author was involved:

- 1977 national sample survey of academics in universities and colleges of advanced education (CAEs) for the Williams Committee (Harman, 2000);
- 1997 national sample survey of academics (Harman, 2000);
- 1997 survey of a sample of science and technology academics in three Group of Eight universities (Harman, 1999);

- 2001 survey of a sample of science and technology academics in six Group of Eight universities (Harman, 2002a);
- 2000 survey of all PhD students in two Group of Eight universities with follow-up interviews (Harman, 2002b).

Changes in the Australian higher education system

Since 1990, the Australian higher education system has experienced dramatic and far-reaching changes that have touched numerous aspects of university life. These changes also have consolidated and extended the substantial reforms of the late 1980s. Particularly important have been:

- substantial increases in total student enrolments and international student enrolments, and the development of stronger, larger and more comprehensive institutions;
- a more market-oriented and competitive regulatory environment, with less institutional dependence on government operating grants and substantial increases in institutional generated revenue and more dependence on student fees;
- a more student focussed approach to course offerings and student learning, and new access and equity initiatives;
- major expansion in research activity and research training, with closer university-industry research links, and an increased emphasis on competition in research allocations and in monitoring outputs;
- new quality assurance initiatives, improved monitoring and evaluation mechanisms, and a more international orientation; and
- within universities, a more corporatist and entrepreneurial approach to institutional management and governance.

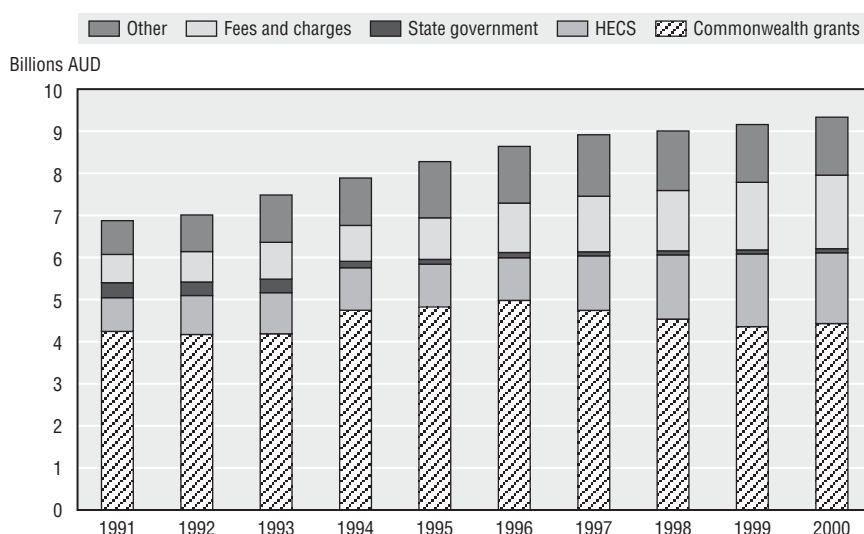
While there was no single turning point of great consequence during the 1990s, such as the end of the binary system and the establishment of the Unified National System in the late 1980s, collectively a combination of important Commonwealth policy decisions combined with institutional initiatives led to quite fundamental change.

The most important and far-reaching developments were the adoption of the more market-based funding environment, implementation of policies leading to substantial growth in self-earned income by universities and to the attraction of large numbers of international students, deteriorating staff: student ratios, and a more managerial approach to university governance and administration. Changes in the funding environment and income generating policies fundamentally changed the operation of universities and their relationships with the state. Universities have not only become increasingly self-sufficient financially but the structural relations with government

changed from being academic referenced in a traditional form to being state referenced and then to being market referenced. The extent of these changes, first pulling away from traditional academic orientations and then pushing towards stronger market influences, were anticipated by few when the major reforms of the late 1980s commenced.

The proportion of income received by universities from non-government sources increased over the past decade (Figure 1) and that share is projected to grow. As a consequence, change is being increasingly initiated by the universities themselves as they redesign their services, capturing new markets, commercialising knowledge outputs, internally reorganising, and externally networking.

Figure 1. **Sources of university revenue 1991 to 2000**



Source: Department of Education, Science and Training Statistical Collection.

In each successive year following the 1988 White paper on higher education (Dawkins, 1988), Commonwealth policy became less prescriptive and more driven by incentives than mandates. National targets for graduate output by fields of study were abandoned, data collections were reduced and requirements for mandatory research plans were discontinued. Project-specific capital works financing was largely replaced by a “roll-in” of capital funding into the operating grant for maintenance and new developments. Detailed approval and accounting processes for course shifts across fields of study were relaxed, giving universities greater discretion to be responsive to

changes in demand and opening up competition between universities. Universities also were encouraged to expand both overseas and domestic fee paying courses. The response of institutions varied, but many responded positively to revenue generation opportunities, with some becoming aggressively competitive.

In the mid-1990s, the Commonwealth sought to further reduce dependency of universities on the state and to enable them to respond more directly to market signals by raising the level of user payments relative to public investment. It also relaxed some of the rules related to charging student fees and pressed universities to make genuine productivity gains for salary raises negotiated through enterprise-specific bargaining. In 1995, the Labor Government refused to provide full automatic supplementation for staff salary rises achieved through enterprise bargaining, requiring the universities to find the component above the general price adjustment index through internal efficiencies and external earnings. The incoming Coalition Government in 1996 retained this policy, and the non-funded gap between operating grant indexation and actual salary outcomes grew significantly by 2000. The result has been that generally operational funds per student unit have declined while staff: student ratios have climbed from about 1:14 to almost 1:20. Between 1991 and 2000, student load increased by 32% but total staff numbers increased by only 12%.

More recently, Commonwealth Government policy has focused on strengthening the incentives for universities to develop research links to national innovation, concentrating research expertise in centres of excellence, improving the relevance and efficiency of research training and reinforcing the overall quality assurance framework. The intent of policy as outlined in the White Paper on research and research training (Kemp, 1999) was to strengthen the links between the work of universities and the market.

Transition to a mass higher education system with a stronger emphasis on the use of market mechanisms combined with concurrent growth in the diversity of institutions, programs and course delivery arrangements, have required increased attention to quality assurance and monitoring of the performance of institutions. Moreover, the growth in fee-based courses and increased enrolments in private institutions produced increased pressures to ensure that universities were meeting students needs.

Qualifications and academic interests

Australian academics today clearly are much better qualified than they were in the 1970s but at the same time they have not lost many of their traditional academic values and their strong professional interests in their key roles in teaching, working with students and research. The proportion with

doctorates increased from about 54% in universities and 15% in CAEs in 1977 to about 70% in pre-1987 universities in 1997, and to about 45% in post-1987 universities. Now in research intensive universities, except for some professional fields such as law where a PhD is still not the norm, it is unusual to find staff in the grades of lecturer and above without a PhD. This has meant an increasing proportion of academics in the career grades are competent to undertake research and supervise higher degree research students. Fewer academics find it necessary to spend considerable amounts of time in pursuing postgraduate qualifications.

Despite the significant changes, the academic profession remains strongly committed to the university and the enterprises of teaching and research. Table 1 compares the proportions of academics in 1977 and 1997 who rated their interest in different work activities as “very interesting” or “extremely interesting”. While the overall pattern of academic interests has remained stable over the twenty-year period, there has been an overall increase of interest in research and writing has increased while there has been a decrease of interest in administration and committee work. Interest in teaching has remained stable but interest in working with students has increased; both these activities, however, remain areas of high interest.

Table 1. **Interest in key work activities: percentage saying that activities are "very interesting" or "extremely interesting"**

	Administration	Committee Work	Teaching	Consulting with students	Research and writing	N
1977						
Universities	10.0	9.1	84.3	77.4	88.7	1 366
CAEs	19.2	15.6	90.2	81.2	68.2	1 222
<i>Total</i>	<i>14.3</i>	<i>11.4</i>	<i>87.9</i>	<i>78.4</i>	<i>78.0</i>	<i>2 588</i>
1997						
Go8 Universities	6.2	8.7	84.1	72.8	89.3	243
Other Pre-1987 Universities	8.0	7.5	84.6	77.0	89.7	213
Universities of Technology	8.7	11.1	88.1	75.0	80.4	128
New Universities	11.6	1.0	85.8	79.3	81.7	153
<i>Total</i>	<i>7.5</i>	<i>8.8</i>	<i>83.3</i>	<i>85.5</i>	<i>86.3</i>	<i>737</i>

Source: Author.

The results in Table 1 are heartening. High interest today in research and writing is not surprising given academics being now more highly qualified, with more emphasis being given by institutions to research performance, and with former CAEs having been absorbed into universities. The decreased

interest in administration and committee work sits somewhat uneasily with traditionally strong commitments to collegiality, but the explanation probably is that, with the increased time demands of both administration and committee work in busy work schedules, many academics resent the intrusion of what they regard to be unnecessary or lower priority administration and committee work on core academic activities.

Time academics spend on different work activities

As in many other countries, Australian academics now work harder and have a considerably longer workweek than a couple of decades ago. Table 2 compares staff estimates of time spent in different work activities for 1977 and 1997. Strata 1/2 for 1997 refers to pre-1987 universities while strata 3/4 refers to post-1987 universities. The average workweek has increased by about 5 hours per week. Despite less favourable staff:student ratios and often larger classes, time spent on teaching, teaching preparation, and laboratory classes has declined, while time spent on administration and on research and writing has dramatically increased, and time spent on student appointments and other professional activities has increased somewhat. Time spent on marking students work has remained constant. The trends with regard to time spent on teaching may raise issues about quality assurance.

Table 2. **Estimated time spent per week during semesters in work activities (mean number of hours)**

	1977			1997		
	Unis N = 468	CAEs N = 1249	Total N = 1717	Strata 1/2 N = 416	Strata 3/4 N = 250	Total N = 660
Lectures and tutorial groups	7.0 ¹	9.7 ¹	9.0 ¹	7.0 ¹	8.6 ¹	7.7 ¹
Marking students work (including exams)	4.8 ¹	4.5 ¹	4.5 ¹	4.0 ¹	5.3 ¹	4.5 ¹
Preparation of new courses, lectures, tutorials	6.6 ¹	7.5 ¹	7.3 ¹	6.2 ¹	7.1 ¹	6.5 ¹
Laboratory classes	2.7 ¹	3.7 ¹	3.3 ¹	1.7 ¹	0.9 ¹	1.4 ¹
Student appointments	3.6 ¹	3.7 ¹	3.6 ¹	3.6 ¹	4.2 ¹	3.9 ¹
Administration	3.7 ¹	5.3 ¹	4.8 ¹	7.7 ¹	8.0 ¹	7.8 ¹
Committee work	1.9 ¹	2.6 ¹	2.4 ¹	2.9 ¹	3.0 ¹	2.9 ¹
Research and writing papers, books etc	10.2	3.8	5.6 ¹	12.4	7.8	10.9 ¹
Other professional community activities	3.8 ¹	3.2 ¹	3.6 ¹	4.3 ¹	3.7 ¹	4.1 ¹
<i>Total</i>	<i>44.3¹</i>	<i>44.0¹</i>	<i>44.1¹</i>	<i>49.8</i>	<i>48.6¹</i>	<i>49.7¹</i>

1. Differences are statistically significant ($P < 0.05$).

Source: Author.

Elsewhere data about the work patterns and interests of heads and deans has been reported (Harman, 2002c). Despite a marked increase in the range of managerial work expected, the work patterns each week for deans and heads have remained remarkably stable since the 1970s, except that like their academic colleagues deans and heads now spend about five hours on average more time each week in work activities. Curiously, the actual time given by deans and heads to administration and committee work decreased slightly between 1977 and 1997 while the time spent on teaching increased and the time spent on research increased considerably.

Moreover, despite their heavy involvement in administration and committee work, deans and heads see these activities as the least interesting aspects of their work and, in fact, their interest in these activities declined appreciably between 1977 and 1997. In 1977, for example, some 23% of university deans and heads reported that they found administration “very interesting” or “interesting” while by 1997 this proportion had dropped to 13.5%. Even more puzzling in 1997 50% of the deans and heads said that they found administration “very boring” or “dull”, while 41% gave a similar rating to committee work. These ratings may reflect genuine dislike of administration and committee work but it might also be a reflection of traditional academic values. Another possible explanation is that for many high performing academics both administration and committee work do not generate the same degree of intrinsic interest as do academic activities, particularly research and writing while like other academics deans and heads are under increasing pressure to publish and attract external research grants.

Research productivity

With increased overall interest amongst academics in research since the late 1970s and more time being spent on research and writing, it is not surprising that research productivity has increased appreciably. Table 3 summarises the results for total reported publications over the career of respondents in both 1977 and 1997. While there was a marked improvement in productivity over the twenty-year period, there were and continue to be sharp differences between different types of institutions. In 1977, productivity in terms of the publication of articles by university academics was over three times that for staff in CAEs. This gap slightly decreased over the next twenty years but by 1997 academics in Group of Eight and other pre-1987 universities had just under three times the publication records in articles of those in universities of technology and new universities. These differences point to the comparative strength of older universities in research and lend weight to some of their claims with respect to the allocation of research infrastructure funds.

Table 3. **Total number of articles and books published**

	Articles	Books	N
Universities 1977	17.1 ¹	0.6	1 402
Universities Strata 1-2 1997	35.4 ¹	1.4	458
CAEs 1977	5.2 ¹	0.4	1 249
Universities Strata 3-4 1997	13.3 ¹	1.1	286

1. Differences are statistically significant ($P < 0.05$).

Source: Author.

Academic staff satisfaction

Over the twenty year period, academics appear to have remained highly satisfied with the key academic components of their jobs, although at the same time they have been highly critical of various aspects of the environment in which they work and matters such as salary and working conditions. Respondents in 1977 were asked how satisfied they were with their jobs. Amongst university staff, 91% said that they were “very satisfied” or “satisfied”, while only 7% said they were “dissatisfied” and only 2% said they were “very dissatisfied”. Amongst CAE respondents, 89% said they were “very satisfied” or “satisfied” while about 9% said that were “dissatisfied” and 2% “very dissatisfied”.

The same item was not repeated in 1997 although some 76% of respondents said they were satisfied with the courses they taught and 62% rejected the proposition that, if they had their time over again, they would not be an academic. The Carnegie survey in the early 1990s produced similar results, with 77% of Australian academics saying that they were satisfied with the courses they taught and 66% disagreeing with the proposition that if they had their time over they would not become an academic (Altbach, 1996, pp. 15-17). At the same time, it should be noted that in our 1997 survey 82% of respondents said that academics at their institution work much harder than five years ago, 59% said that their department has insufficient administrative support, and 62% said that at their institution promotion opportunities were too limited. Almost 70% said that their institution had far too many administrators and almost 60% said that university administrative salaries were far out of line with academic salaries. In their work on the Carnegie study, Sheehan and Welch (1996, p 68) found no significant difference in job satisfaction between male and female academics in Australia, but more junior staff tended to be less satisfied than senior staff.

Data on mobility and interest in other appointments provides additional insights on the satisfaction of respondents with academic employment and their current institution. In both the 1977 and 1997 national surveys, respondents were asked whether they anticipated applying for another position outside their

current institution in the next three years. What is notable about the responses is that overall in both 1977 and 1997 only about one third answered yes. However, the proportion saying a definite no was about 12% higher in 1977 compared with 1997, while the proportion saying they were uncertain was about 12% higher in 1997 compared to 1977. This suggests that in 1997 a proportion of staff were less certain about the prospect of staying on indefinitely in their institution.

Respondents in both the 1977 and 1997 national surveys were also asked about the attractiveness of other positions. Overall, the responses for both surveys summarised in Table 4, show a remarkable degree of consistency. In both years, the most attractive option was another higher education appointment at a higher salary, which points to a high degree of satisfaction with academic employment. Next in attractiveness were appointments at a higher salary in industry and at a higher salary in the public service. Another pointer to the comparative attractiveness of the academic profession is that both in 1977 and 1997 about one third of respondents said that they would consider another higher education appointment at the same salary and that, in comparison, both industry and public service appointments at the same salary were attractive to only about 10 to 15%.

Table 4. Percentage of respondents who would consider alternative appointments

	1977 N = 1716	1997 N = 482
At another University/higher ed institution at the same salary	33.6	31.6
At another University/higher ed institution at a higher salary	58.2	58.6
At another University/higher ed institution at a lower salary	5.7 ¹	2.7 ¹
At a technical/TAFE college at the same salary	12.7	9.9
At a technical/TAFE college at a higher salary	33.5 ¹	21.2 ¹
At a technical/TAFE college at a lower salary	3.1 ¹	1.5
In industry at the same salary	13.8 ¹	10.2 ¹
In industry at a higher salary	41.7 ¹	51.1 ¹
In industry at a lower salary	3.4	2.8
In the public service at the same salary	15.2 ¹	9.4 ¹
In the public service at a higher salary	43.8	46.8
In the public service at a lower salary	3.0	2.5

1. Differences are statistically significant ($P < 0.05$).

Source: Author.

Adjustment to commercial activities

Despite holding many traditional academic values and being highly critical of government policy on higher education and the management of their own universities, many Australian academics have made what appears to be a successful transition to attracting external research funds from

industry, establishing research links with industry and other entrepreneurial efforts within their departments and schools.

In the 1997 national survey of academics, many respondents were highly critical of key changes in government and institutional policy. Only about one in five thought the Dawkins reforms of the late 1980s had been needed while about 90% said that the 1996 budget cuts had had a particularly unfortunate impact on universities. They were strongly in favour of more government investment in higher education. Almost 70% disagreed with the proposition that students should bear an increased proportion of the costs of higher education and only about 15% favoured a student voucher system. Over 70% said that academic freedom was being eroded, only about 30% thought that senior management in their university was competent, while 60% said that the salaries of university administrators were far out of line with academic salaries (Harman, 2000).

At the same time, many respondents themselves reported involvement in various forms of new commercialism. About 40% reported being involved in consultancy and research with industry and government agencies, while about one quarter reported being actively involved in the recruitment of “full-fee paying” students. About 50% said they like the excitement of working with industry and almost the same proportion said they like consultancy work because of the additional earnings it brings. About one in two agreed that higher education must be seen as an international enterprise whose services are delivered in the global market, almost 50% said that increased competition is a good thing for universities, and 61% said all universities need mission statements and strategic plans.

Two separate surveys in 1997 and 2001 of science and technology academics in research intensive universities revealed further details about adjustment to new research links with industry. While respondents in both cases clearly held many traditional academic values about research, including being well aware of the dangers of industry research links and commitment to notions of the free flow of research information, some 40% reported that they had industry research funding. They saw this as being important and positive as it generates additional resources, provides financial support and career possibilities for research students, and gives academics opportunities to apply the findings of basic research to industry problems. Significantly, academics with industry funding tend to be older and more senior than those without such funding and they spend longer at work each week, and more time on postgraduate teaching, administration and committee work, and interaction with colleagues. They also have decidedly superior publication records. At the same time, respondents were well aware of potential dangers, despite the fact that almost 40% of those who in 2001 reported industry funding reported that they had conducted research where the results are the property of the sponsor

and cannot be published for a period without the sponsor's consent. Further, over 20% of respondents admitted to having deliberately delayed publication of results for over six months. Curiously, however, safeguarding the researcher's self interests was often as common a motive for delaying publication, or failing to share results or materials with research colleagues as protecting the intellectual property of a sponsor. One reason that many senior academics have been so successful in attracting industry research funds and at the same time protecting traditional research norms is that having multiple sources of funding is common, with frequently the one researcher or team having funds from both national research councils and from industry (Harman, 2001; Harman, 2002a).

Views of prospective academics

Data from a survey of PhD students in two of the strongest Australian research intensive universities point to surprisingly low satisfaction levels about their course experience, to considerable uncertainty about career prospects, particularly for those from more traditional arts and basic science disciplines, and to quite negative views about universities and the academic profession. This raises concerns about the ability of the academic profession to sustain itself in the longer term and attract the kind of talent and expertise it needs for the future.

Only 56.9% of respondents rated their overall course experience as PhD students as "satisfactory" or "very satisfactory", with the proportions of satisfied students being even considerably lower for part-time students. Almost 13% of total respondents rated their course experience as "unsatisfactory" or "very unsatisfactory" (Harman, 2002b).

Substantial numbers of students were critical of the quality and effectiveness of supervision, availability of working space for students, and access to specialised equipment. Regression analysis pointed to supervision as one of the main contributing factors to low levels of course satisfaction while interviews with students identified discontent with supervision as often being related closely to the time supervisors can give to students, rather than to the supervisor's technical competence or supervisory skills.

Although the PhD degree is meant to provide high-level research career training, only slightly more than half the respondents expect to follow research careers. Many have negative views about academic careers based particularly on their perceptions of the impact of reduced government funding levels on universities and the increased workload pressures on supervisors. On the other hand, a high proportion of total respondents hold positive views about university-industry research links, with those students with industry research funding showing higher levels of course satisfaction than other students.

Student interviews found many students who were highly satisfied with supervision. Effective supervisors were praised for their enthusiasm, the time they spend with students, their technical skills, and willingness to give students appropriate independence. However, criticisms were voiced especially on access to supervisor and the time supervisors had available to meet with PhD students. One science student in the first year of study who had moved from another university to accept a scholarship explained that she has:

“... realised that my supervisors are ever so difficult to get help from and busy with their own work – meeting the requirements the university has on them to publish, etc. – that I have been neglected. Hence, as much as I enjoy PhD research, and the PhD experience, to me it feels as if I were a qualified researcher (which I am not) rather than a student.”

Another science-based student complained of supervision problems “due to the limited time available by the supervisors”. She went on as follows:

“I feel that my supervisors have taken me as a student but have not been prepared to worry about the final details of the project AND my progress. Whilst I meet once a week, the interaction is very limited – especially when other phone calls seem to be more important!”

In interviews many students in science and technology fields commented on the heavy demands on their supervisors and that funding cuts and the need to raise research funds were taking a heavy toll on time that academics had available. Universities were seen by many as difficult places today for scientists. A female science student said that academics need to

“... spend a lot of time getting money. It worries me that some of the best brains in universities don’t get research grants. Science jobs can be very insecure and your research gets directed where the money is.”

Data about career plans and student views of universities are somewhat disturbing. Despite the fact that PhD courses are viewed by both governments and universities as high level research training, only 54.6% of respondents said they expected to follow a research career after graduation. Another 24.1% said that they definitely would not follow a research career while 24.1% said they were not sure. Using discriminant analysis followed by independent group t-tests, the relationship between expectation to follow a research career and course satisfaction was explored further. This showed that a key determinant of not following a research career was dissatisfaction with supervision.

Only 58.3% of respondents said that they were optimistic about their career prospects while 18.0% said that they felt trapped by their area of specialisation and 31.5% said that oversupply of PhD graduates will affect their career prospects.

Finally, with regard to careers, the questionnaire asked PhD students to indicate *ideally* what kind of a position they would like to have three years after graduation and *realistically* what kind of position they thought they would have. This item caused considerable difficulty for some respondents, with 8% of respondents failing to answer the first part of the question and 9% the second. Of those respondents who replied, 10.0% said ideally they would like to be self-employed, 34.2% an academic appointment, 10.4% a public service/private industry appointment, 32.4% a post-doctoral position and 7.9% a management position while 5.1% said they did not know or were not sure. The responses for the second part of the question asking for a realistic assessment of the kind of position that they would hold in three years time were similar, except that 18.1% said they did not know, with the largest gap between ideal and realistic careers being for academic appointments.

Interviews proved particularly valuable in generating additional information and in throwing light on the survey responses. They confirmed that a sizeable proportion of full-time students do not expect to follow research careers, or were unsure about the kind of employment they will end up following.

While earlier generations of PhD students were particularly attracted to academic and research careers, our interviews confirmed that today's generation of full-time PhD students not only recognise that academic and research careers may be hard to achieve but, more important, many are not particularly attracted to such careers. Many students in science and technology fields commented on the heavy demands on their supervisors and that, in order to achieve success as an academic, they would not only have to secure such an academic appointment in a highly competitive market after completing two or three post-doctoral appointments but then they would need to be able to attract sufficient external research funding to run a laboratory and support research students. One male student in chemistry commented: "When I first started I wanted to be an academic but the more I see of my supervisor I'm not sure that I want to be an academic." Similarly a female student in a social science discipline commented:

"I don't want to be an academic. I wanted to do a PhD and I thought I liked research. But it's not the right climate today. There is no way on God's earth that I would want to work in a university. Universities are mean in a penny-pinching way. The culture is not exactly tops!"

Some students mentioned the possibility of research careers in industry and saw this as attractive. Others reported that, while in principle they were attracted to research careers in industry, on the basis of interaction with industry scientists they were concerned about heavy workloads and that many scientists were soon drawn into management.

Concluding comments

This article provides a somewhat different but complementary view of the academic profession today in Australia. It does not contradict the dominant view that transition to the new higher education environment has been painful and damaging for the profession, with many academics feeling deeply frustrated, disillusioned and angry. However, the argument presented is that this is by no means a complete picture of the academic profession today since many academics appear to have made remarkably successful transitions to a more entrepreneurial environment, although that new environment itself is often strongly criticised. The article shows that Australian academics today are better-qualified than ever, they work harder, and they are more productive in research than they were in the 1970s. They continue to be deeply interested in key academic roles and many still find the essential elements of their jobs highly satisfying. Many have made successful transitions to productive involvement in research links with industry and in other entrepreneurial activities without jeopardising their academic integrity.

At the same time, there is reason for concern about the future. With teaching loads in terms of total students taught having almost doubled since the 1980s and with ever increasing demands from students and more bureaucratic administrative processes, it seems inevitable that universities and their academics will be unable to continue indefinitely as they are today, especially as many of the next generation of academics currently undertaking PhD study have such negative views about the academic profession and universities. But with a return to more favourable funding levels, even if that means increased student contributions, and some reasonable compromise between collegiality and modern corporate management approaches, the Australian academic profession could well have a much more favourable future.

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Fear and Loathing in University Staffing: The Case of Australian Academic and General Staff

by

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Academic staff and the academic research, teaching and scholarship they undertake are quite properly the prime focus in universities. However, in the modern university, these functions could not be carried out without the input of general (AKA “non-academic”) staff. Staff who are not members of academe represent about 50% of all staff, and as a group are treated with antipathy by many academics. The terms “governance” and “administration” are misunderstood by many academics and used interchangeably when it suits them. This paper considers the binary divide between “academic” and “non-academic” staff, and considers the importance of terminology in ensuring that the total university can operate as efficiently as possible.

Introduction: “Non-academic” staff and university administration in Australia

The focus of this article is those “non-academic” staff who are in that large body of university administrators, and their relationship with academic staff. Half or more of the staff working in and for Australian universities is treated as though it is invisible in the broad discourse about those institutions. Although the core university business of research, teaching and scholarship are the direct purview of “academic” staff, none of these functions could occur without sturdy groups of administrative, technical and other support staff. Staff supporting academic activity represents part of every university’s “infrastructure” and to a large extent are forgotten. Perhaps this occurs because “universities” reputations are made or lost on the actual or perceived quality of the core business; one rarely hears of a university praised for the quality of its administration.

The “invisibility” factor is seen as a continuing problem by support staff. As reported in *Campus Review* on 13 March 2002:

“[T]he Community and Public Sector Union (CPSU) kicked off a campaign in Sydney this week aimed at lifting the veil of invisibility surrounding general staff who work in universities... Glossy posters emblazoned with the message ‘Universities can’t work without us’ are part of the campaign... to highlight the role played by the 39 000 general staff who work in Australia’s public universities ...While tension between general staff and academics varied between institutions and particular areas within universities... it was a permanent and constant feature.” (Elson-Green, 2002, p. 1).

Elsewhere in the report, the CPSU Secretary was reported as saying that “General staff are not there to be resented – they’re not competitors, they are actually partners”. Given the complex and influential nature of the administrative role in the new century, administrators now represent a discrete occupational grouping whose members play a critical and integral role in institutional management.

A focus on institutional management is topical, as the last two major reviews of higher education in Australia have both commented on the urgent need to reform institutional management. Both the Hoare Report (1995) and the West Report (1998) claim a concern about slow moving management

structures. But universities have existed since medieval times, so their management cannot be all that mediocre, yet since 1989 when reforms instituted by the then Minister for Employment, Education and Training, John Dawkins first came into force, successive governments have set out to impose increasingly corporate structures and management practices upon universities. The impact of these corporate management practices and the associated trends of quality assurance, market focus and commercialisation of activities on both the academic profession and the university as an organisation have been explored widely and condemned generally (see for example: Bessant, 1995; Smyth, 1995; Slaughter and Leslie, 1997).

Such considerations of the impact of change on university work is usually from the “academic” point of view (for instance, McInnis, 1998; Pickersgill *et al.*, 1998). The impact of change upon the administrative occupation has not been explored with the same vigour, largely because there is little recognition beyond administrators themselves that a definable occupational grouping exists. The existence of administrators with qualifications equal to those of a university’s professors is a new phenomenon, and not all of these “super administrators” are simply academics who have transferred from academe. These days, administrators even enrol for PhDs, speak at conferences and publish papers in scholarly refereed journals.

The continuing use in the Australian context of the exclusionary term “non-academic” indicates clearly that administrators are still defined by what they are not, rather than by what they are. The use of this terminology might also suggest a perception that the work undertaken by administrators is neither important nor difficult, and not deserving of any special recognition. Such a perception clashes with the perception of administrators themselves that their work is complex and requires specialised skills and knowledge, and that their role is now critical for institutional management.

What’s in a name?

Terminology is a major factor in defining the administrative occupation in Australian universities. The term “non-academic” is used by the Government in its publications and statistics and often by academic staff and institutions. Australian administrators generally react negatively to being termed “non-academics”. For example, the author of a letter to the *Australian Universities’ Review*, (1996) said:

“I do wish you would stop referring to me and my colleagues as non-persons who do non-work... I do not want to be defined as a negative or in oppositional terms. It is necessary to distinguish between the university’s core work of scholarship and ancillary and support activities, and it may still be necessary to distinguish between those primarily

engaged in the university's core work and others. To do this I and most of my colleagues prefer to be referred as general staff engaged in general duties or in support services...Arguably it is now more accurate to refer to academic, management, service and other roles rather than to mutually exclusive categories of work and workers." (Moodie, 1996, p. 32)

Another "Letter to the Editor", in *Campus Review*, presented a similar point of view.

"Not Academic. When is an academic not an academic? When she [sic] is a member of the general staff?... Why do journalists (or their sub-editors) seem oblivious to the prominent role of non-academic staff? Half the higher education workforce are not academics. Universities would collapse without the skilled and dedicated work of a wide range of professional, clerical, library and other staff." (Gale, 12 June 1996)

Terminology is historically and contextually bound. "General staff" has become an acceptable term in Australia and at least one institution has legislated that this term be used in preference to non-academic (for example, Edith Cowan University, 1996, in Western Australia). In the United States, the term "administrator" is a broad one and is a title accorded to university Presidents, Vice-Presidents and the like. In New Zealand, "administrator" is also an accepted term to describe the type of work carried out by the majority of general staff in universities, while in the United Kingdom, university administrator is a generally accepted term as evidenced by the title of the professional association, the Association of University Administrators. That there is not a single, universally recognised term such as "accountant" or "lawyer" to define administrators is a challenge that should be addressed in the future.

Impact of an emerging administrative profession upon academics

A recognisable administrative profession probably began to emerge in Australia in the mid-1970s when the first professional association for administrators was established (the Australasian Institute for Tertiary Education Administration or AITEA). Since then, the number of administrators and the scope of work undertaken by them has increased to the stage where they have become a separate group of staff in universities.

As occupational groups existing within a single organisation they had to fundamentally disturb the traditional work jurisdiction of academics (Abbott, 1988). In the 1970s, academics may not have viewed their primary role as administration, and probably did not want to take on tasks associated with the growing administrative role, but they did not necessarily support a separate and expanded administrative function. Some may have seen that with a more extensive administrative structure, and bureaucratic authority based in that structure, administrators had begun to exert influence upon institutional

management, previously the sole province of academics. Some academics may have viewed such changes as positive and a welcome shift either to a more equal relationship or as a release from unsought responsibilities and duties, but as Dutton (1980, p. 27) suggested “it would be rather over-sanguine to maintain that this represents the universal perception of academics”.

An expanded administrative role and subsequent moves to increase administrator professionalism may not have been viewed favourably by academics because many believed that these increasing numbers of administrators did not understand the purpose and nature of academic work (Dutton, 1980). Following Larson (1977) this would be an understandable reaction, since administrators may have been viewed as attempting to protect their developing position in the broader division of labour rather than providing services needed to support the academic enterprise.

Administrators were, however, aware of the unique nature of the institutions in which they were working, even if it was not readily apparent to academics. Plowman (1977) highlighted the need for administrators to develop and display understanding and knowledge about the academic enterprise as did Bacchetti (1978, p. 11) who argued that “we [administrators] need to be expert not merely on how to get a job done but on how it should be done in order to support and reinforce other qualities and objectives in our college or university”. The need for this wider perspective to underlie administrative work is also advocated by Sloper’s (1975) contention that administrators require a “conspectus view” of their organisation, Silver’s (1983) belief that administrators needed to seek more pragmatically useful ways of constructing their situation and Topley’s (1990, p. 342) contention that administrators needed to develop detached, composite concepts about the field of tertiary education, its institutions, and of their positions and roles. These writers might have been suggesting that administrators needed to ensure that their work was founded in academic values rather than in the bureaucratic way of operation which was characteristic of growing administrative infrastructures.

As a separate administrative role emerged over time, however, academics and administrators appeared to be developing very different operational styles. The traditional academic collegial approach to governance and decision making was still dominant and the impact of corporate management was some years away. Administrators, on the other hand, operated largely within bureaucratic structures, developing and enforcing rules and regulations viewed by academics as attempts to direct and standardise their work (Lane, 1985). Tensions between the two groups emerged and it is argued that both groups consequently developed quite distinct ideas of their role and their values:

“As cadres of professional experts replace the professor-amateur, in campus, provincial and national administration, a separate set of roles

and interest emerge around which separate definitions of the situation form.” (Clark, 1983, p. 89)

“The growing power of non-academic administrators raises the question whether they develop functions and values which are separable from those of the heads of institutions and other academic decision-makers whose work they service.” (Becher and Kogan, 1992, p. 179)

Demand for administrative services and support has not diminished and continues to develop in both diversity and specialisation. Management of universities now requires “of their administrative staff professional commitment, the exercise of sophisticated skills and the shouldering of responsibilities at levels scarcely imagined by their predecessors of twenty-five years ago” (Warner and Palfreyman, 1996, p. 9). Administrators, however, are often seen to assume a degree of authority not necessarily grounded in academic structures or traditions. Tensions between academics and administrators have deepened as changes to the way universities are managed has resulted in academics feeling less privileged and “oppressed beneath the weight of administrative authority” (Rourke and Brooks, 1966, p. 180). Antagonism between academics and administrators was probably heightened when, in the 1990s, administrators became the overt conveyers of corporate management practices into universities, alienating them even further from academics.

Conflict between emerging and established professions in organisations is not unusual but is probably exacerbated where the changing role of one group is not recognised through a formal settlement or reassessment of the existing division of labour. Even though there is a professional association for administrators, there has never been a formal claim by administrators or their professional association for a part of the division of labour in universities. The situation has therefore arisen where there are two separate groups operating in parallel in universities, with possibly divergent value systems, and an interface that is often less than positive because of misunderstanding and misinterpretation of roles and work practices. Add to this situation the emergence of a third management group of ex-academics who have become full-time executives – the “academic managers” – and the mix becomes more complex.

Administrators and the administrative role in 21st century universities

The university environment is a complex industry in terms of the degree of diversity of activity and within the ranks of academic and administrative practitioners, students and other stakeholders. Within this environment, the roles of both academics and administrators are sometimes ill-defined but as

Gross and Grambsch (1968, pp. 1-2) suggested, work functions are often allocated priority of importance:

“Activities connected with teaching and research are assumed to be the chief reasons why universities exist, though just what these activities are is often not specified. Further, carrying out these tasks is held to be the primary responsibility of the academic staff. The administration, it is assumed, has as its main task the providing of support for the academic activities. Support is usually defined to include maintenance activities... and integration activities. Few people would dispute the claim that support activities are necessary, but they are regarded as less important than academic activities.”

Administration in the 21st century is now a separate work jurisdiction requiring skills and knowledge not inherent in academic work, as Lockwood and Davies (1985, p. 315) assert:

“If institutional manageability and responsiveness are to be increased, Administrations should be more assertive that the distinctive competence of the academic professional lies in matters academic; it does not endow the individuals with superior knowledge or wisdom in all matters, neither does it necessarily provide the individual with skills of leadership of management, and nor does it elevate academic faculty as a class into an aristocratic situation vis-à-vis the servant classes or other employees.”

Administrators would argue that their role is not subservient, and there seems to be some acknowledgement that a separate administrative role requiring specialised expertise does now exist. It is less clear, however, whether or not there is a shared understanding of either the nature of the role or the expertise required to undertake the role. It has been suggested recently that the boundaries between academic and administrative work are blurring (Gornall, 1999; McInnis, 1998; Pickersgill, 1998) which may be the case in some areas such as the development of flexible learning where the introduction of new delivery methods has created a new set of work tasks. Gornall (1999) noted that these new tasks were being undertaken by a new group of staff, emerging as “new professionals”. The development of this new area of work might be viewed as another disturbance to the academic work jurisdiction where a claim to control the new work will need to be contested between academics and the “new professionals” (Abbott, 1988).

There is, however, a danger in accepting all the dialogue about blurring boundaries. It is a moot point whether academics would accept that the role of administrators in a departmental or faculty office is blurring with their teaching and research roles. The blurring argument might be appropriate for the “new professionals” but it is debatable that it can be, or should be, applied universally across all administrative work.

Governance and administration

Discussion of blurring roles or converging work assumes that there is clarity around what academic and administrative roles already are, which is not necessarily the case. Administrators today are a heterogeneous group. The range of skills, knowledge and qualifications they bring to universities is significant. Their functions range from standard “bureaucratic” administrators who could equally work in a university or any other enterprise, through to professional specialist administrators. Their number includes those “academic managers”, the ex-academics who have left that calling. There is little overt differentiation between career administrators and academic managers – they are all technically “non-academic” staff – even though the tasks for which they are responsible are certainly different.

Academic managers, not administrators, remain in charge of decision making and governance in institutions, while administrators develop and provide critical information and advice to inform such decisions. Administrators are also responsible for managing large sections of institutions in their own right, but issues surrounding governance and strategy are still essentially determined by academics and academic managers. In the eyes of many academic staff, however, administrators and academic managers are the same, particularly when administrators are seen as responsible for implementing changes perceived to be harmful to universities. There is a difference between the roles, boundaries and work of academic managers and administrators which needs to be clarified and recognised.

If the administrative role is not recognised and if the tension between academics and administrators is increasing, from whence do the “tensions” arise? Arguably, they arise from a fairly fundamental cause: too few staff (particularly academic staff) understand or appreciate the reality of university authority structures. The ills which have befallen universities in recent times have frequently been seen by the academic staff as being the fault of “the administration”, without any deconstruction of what the term really means.

A recent example of the misunderstanding of the difference between “governance” and “administration” came in a 1999 article in the Melbourne broadsheet *The Age*. Like so many others, the author criticised the “administration” when he was actually criticising academic managers, demonstrating little knowledge of who it is who actually govern and make decisions about our universities (Manne, 1999). Academics and academic managers govern universities, administrators manage them.

Universities have past academics as their chief executive officers, and in fact the Vice-Chancellor’s senior management group at most universities comprises staff with an academic past, although a few Australian universities now have Deputy Vice-Chancellors who have not come through academic

ranks. Australia's first "non-academic" vice-chancellor was appointed in 2000. The Vice-Chancellor of another university has academic qualifications which would arguably preclude him from most senior posts within many academic departments. These examples, however, are the exception rather than the rule.

Between 1989 and 1998, the number of full time equivalent staff in Australian universities increased by almost 23%, from 65 344 to 80 285, although the peak number of staff occurred in 1996 (82 888). Over the same period, the number of equivalent full time students increased by 50% (174 000). Numbers of staff of all types increased between 1989 and 1998, but the proportion made up by teaching staff decreased marginally, with research staff numbers and "other" numbers both increasing by about 1%. In fact the distributional changes were minor, and might even be due to universities reporting on their staff in different ways between the two years.

So there is an administrative work jurisdiction emerging and developing, driven by the same forces driving change to both academic work and universities, but not yet formally accepted as part of the division of labour. The implications for universities of having two professional groups existing in parallel in the one organisation are largely unknown, and is a topic for further research.

Anecdotal evidence suggests that the interface between academics and administrators is increasingly hostile (McInnis, 1998) but at the same time, the interdependency between those two groups is increasing. There appears to be a fundamental misunderstanding or misinterpretation of the scope of the work and decision making authority of administrators, generated by a confusion between "governance" on the one hand and "administration" on the other.

For administrators to be able to formally claim their position in the division of labour in universities, they will need to clarify the knowledge base, skills and expertise they bring to university management and, perhaps most importantly, to define how their work contributes to the teaching and research that is the core business of universities. Without such an assessment, we risk an incomplete understanding of how universities operate and continuing confusion about who has the most appropriate skills, knowledge and abilities to govern and manage. Few administrators see their own role as being fundamental to the core business of universities, but without them and their expertise, universities would not be able to properly undertake their core business.

Concluding comments

The history of universities, their governance, organisation, structure and their work has been the history of academics. It is time for that history to now incorporate both administrators – by whatever name – and their contribution

to universities. Clearly there is scope for the role of general staff, and administrators in particular to be clarified, and for recognition and acceptance that universities today are not run by academics alone but by partnerships between academics and administrators. Each partner has separate but interdependent roles, equal in importance in terms of organisational survival. The nature of the partnership and what it needs to be to help universities function effectively and to transform to meet the demands of the 21st century should be the focus of our attention and effort from now on.

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Encouraging Lecturers to Engage with New Technologies in Learning and Teaching in a Vocational University: The Role of Recognition and Reward

by

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Bournemouth University faces the same challenges as many other universities. These arise from the sector-wide agendas, such as widening participation, regional partnerships and international collaboration, in addition to increasing research activity and managing with reduced funding. A key priority within Bournemouth's Learning and Teaching Strategy is to use learning technologies to address these challenges. Several incentives are being used to encourage lecturers to adopt online learning. These have as their common focus the need to value teaching activity on an equal footing with research. The strategies used include funding for learning and teaching projects, a Learning and Teaching Fellowship Scheme, the creation of a Centre for Academic Practice to focus on pedagogic research, payment for membership of the Institute for Learning and Teaching in Higher Education, and a staff development programme for Programme Leaders. These initiatives are possible because the University has taken a strategic approach to using government funds for learning and teaching and human resources development (HRD) policies. However, putting in place such incentives is only worthwhile if they work, and research suggests that successful and widespread implementation of online learning depends on a number of factors (Johnston and McCormack, 1996; Steel and Hudson, 2001; Somekh, 1998; Spotts, 1999). This article presents findings from research in progress by the author which is investigating factors affecting the adoption of online learning by lecturers at Bournemouth and their motivation to change their teaching methods. The methodology used is action research and the article ends by briefly illustrating some of the issues faced by the researcher conducting research in her own organisation.

The challenges facing higher education

Introduction

The context for extending the use of learning technologies in universities is often discussed with reference to a number of external, shaping forces.

The first of these is the broad political drive by governments to harness higher education to the needs of the economy. Through widening access to higher education and by promoting the concept of lifelong learning, more people are being attracted into higher education who would not traditionally have considered going to university. This changing concept of seeing a degree as a route to a job has led to many changes to the curriculum, including the incorporation of vocational and transferable skills (Coaldrake and Stedman, 1999).

The resulting increase in student numbers and growth in the diversity of the student population are encouraging universities to consider new patterns of curriculum design and more flexible strategies for learning and teaching. These are aimed at increasing access to learning from locations other than the traditional campus, for example, from home and from the work-place, and at times that are convenient to the individual student. This greater diversity of student background is also resulting in the need to make changes to student support and guidance structures and processes. Students enter university with less well-developed study habits, needing a wider range of study and language support.

However, as the number of students entering higher education has risen, so have the costs, while, in the United Kingdom, the corresponding per capita funding from government has fallen consistently for two decades. Universities are forced to seek more efficient ways to deliver education and to generate income from a wider range of sources, for example, from enterprise activities in collaboration with business. The higher fees contributed by international students, either on campus or in their home location, have become an important source of income, but this, together with home students contributing more to their fees, is resulting in a growing emphasis on customer orientation in universities. Students are one group among a rising number of stakeholders demanding greater accountability from universities (Coaldrake and Stedman, 1999; Watson, 2000).

Many universities are looking towards an increased use of learning technologies to address these challenges, and Bournemouth is no exception.

The development of Bournemouth University

The specific ways in which these challenges are being addressed by Bournemouth University are a reflection of its history and educational philosophy. Bournemouth University is a vocational university on the South coast of England. It aims to be “a pre-eminent vocational university well founded in terms of educational equality and student appeal”; (Bournemouth University, 2002, p. 4). It currently has around 8 000 full time students and 4 000 part time students and about 1 000 full time staff. Approximately half are lecturers within seven schools that reflect vocational areas rather than traditional academic disciplines. The other half constitutes management and support staff. One of the largest Support Services is Academic Services, in which the author is located.

The University was originally an institute of higher education, administered until 1988 by a Local Education Authority. Following incorporation it obtained polytechnic status in 1990, and was awarded its charter as a university in 1992. During this time the organisation underwent a period of rapid growth and change, experiencing a highly centralised approach to its management. For the last seven years, however, following the appointment of a new Vice-Chancellor in 1995, there has been a gradual shift towards a more open and collaborative style of management. The lengthy process of seeking staff views on the development of strategic plans is a reflection of this changed approach.

Since 1995 a process of financial devolution has also been taking place, as budgetary control of resources has transferred from the centre to each School. Schools are credited with income from which they pay their staffing and other direct costs, and contribute to the University’s overhead, including the Support Service costs. This has placed an increased responsibility on Schools and Support Services to provide a sound rationale for their activities and financial allocations.

Meeting the challenges at Bournemouth

Bournemouth University is addressing these sector-wide challenges in a distinctive way with reference to its mission. Its strategic targets, to be achieved by 2006/7, are ambitious. They include developing more flexible approaches to learning and teaching in all programmes to enhance accessibility and widen participation, achieving excellence in research in five designated areas and significantly increasing income generated through enterprise activities. The role of learning technologies in helping to secure the achievement of these targets is evident in a number of ways.

In response to the widening participation agenda, Bournemouth is committed to developing higher education through partnerships with local further education colleges. The innovative way in which this is being undertaken has been recognised through substantial funding from the Higher Education Funding Council for England (HEFCE) for a project to develop a common learning infrastructure across the partnership. This will present many opportunities to widen access to higher education through a virtual learning environment, but the curriculum will have to be sufficiently flexible to enable students to access it, especially for lifelong learning students. This has many implications for the delivery of teaching and the development and support of student learning.

The need to attract increased funding through diversifying income streams is resulting in all lecturers being encouraged and enabled to engage in income-generating research or consultancy. However, in order for them to have the time and space to do this, ways have to be found to re-structure learning and teaching activities, and the use of learning technologies is being promoted as one way of achieving this greater flexibility.

Strategic factors affecting the adoption of learning technologies

Senior management support and funding

Since the increased use of learning technologies is a key priority for senior managers at Bournemouth, attention is being paid to ways in which lecturers may be encouraged and supported to use them. It is recognised that change strategies for encouraging greater use of technology should take into account issues related not only to organisational structure (Bates, 1997) but also to the individual preferences and motivations of those affected by the changes (Moore, 1991; Collis, Peters and Pals, 2000). The complex influence of the decentralised nature of academic culture should also be taken into account (Bottomley *et al.*, 1999; Coaldrake and Stedman, 1999; Taylor, 1999)

Two key enabling factors at the institutional level are the vision and support of the senior management, both at the executive level and within faculties, and having appropriate deliberative structures, again both at university level and faculty level, where issues relating to online learning may be discussed and policies agreed. These are in place at Bournemouth. A Learning and Teaching Development Committee has been constituted as sub-committee of Senate and is chaired by the Pro- Vice-Chancellor Academic. Within each of the seven Schools, a senior academic has been appointed to a role designated as Head of Learning and Teaching and these individuals act as “champions” of online learning. Another key factor contributing to the development of any initiative is the allocation of sufficient funds. For the past three years, Bournemouth has allocated around GBP 100 000 each year to fund innovative learning and teaching projects. This Learning and Teaching Development

Initiative Fund, with a maximum of up to GBP 15 000 allocated for each project, has supported 10-12 projects each year. Each project must be approved by the relevant School and show clear links to the School's Learning and Teaching Plan and the University's Learning and Teaching Strategy.

Further development and promotion of the use of learning technologies at Bournemouth has also been facilitated by the way in which the Funding Council has targeted funding for different initiatives. Two funding streams in particular which have been used to support, reward and recognise engagement with learning technologies are the Teaching Quality Enhancement Fund (TQEF) for learning and teaching strategies and the Rewarding and Developing Staff in Higher Education funds for human resources strategies (HEFCE, 1999 and 2002). Strategic use of funds from these two streams has enabled processes to be established which demonstrate the extent to which the University values teaching innovation, including the use of learning technologies.

Support from staff and educational development services

In addition to senior management support and funding, another factor enabling innovation to become embedded with the university is an appropriate support structure that can respond quickly to need (Bates, 1997). The location of this educational development support can be provided either through a central unit that services the whole university, through devolved support units established in faculties, or through a combination of both. It has been recognised that the organisational culture of universities leads to very decentralised institutions, yet the very nature of technological innovation demands a whole institution approach to its implementation. This has the potential to cause tension between the faculties and the central units established to implement the change, if not carefully managed (McMurray, 2001).

At Bournemouth, a central facility within Academic Services, the Learning Design Studio, was established to provide pedagogic and technical support for online learning developments. The initial approach taken to encouraging lecturers to use learning technologies was to view the various elements of online learning as a set of building blocks from which they could select elements to use, depending on their pedagogical need. These elements included the development of subject web sites, computer conferencing and computer-assisted assessment. Initially, the impact of this approach was limited, involving mainly the technology enthusiasts, but with the additional appointment of learning technologists within the Schools to provide support closer to hand, more lecturers have become involved. A further strategy to engage larger numbers of lecturers is the in-house development of an easy-to-use managed learning environment (MLE), known as BUBBLE, which will link the School's online learning environments with central administrative systems such as student records.

Factors encouraging lecturers' adoption of online learning

Individual motivations

In addition to having strategic initiatives in place, supportive professional development processes and technology which is easy to use (Somekh, 1998), the successful and widespread implementation of online learning in a university, as with any technological innovation in an organisation, still depends on the motivation of individuals. It helps to understand the motivation of your audiences and the ways in which the motivation of the innovators may differ from that of the mainstream majority (Johnston and McCormack, 1996; Steel and Hudson, 2001; Spotts, 1999; Collis et al., 2000).

It has been suggested that changing academic practice is always a complex process, especially at a time when perceptions of academic work are changing (Martin, 1999; Coaldrake and Stedman, 1999; Taylor, 1999). In order to promote change at the individual level, appropriate staff development for new teaching methods should be in place (Bates, 1997; Cox et al., 1999). Since academics are being encouraged to learn to use the technology and develop appropriate pedagogical approaches, in the face of uncertainty or scepticism about its value to student learning and its impact on the academic workload, development opportunities should concentrate on changing conceptions of learning and learners, and then demonstrate how technology may be used to promote learning. (Taylor, Lopez and Quadrelli, 1996, p. xiii). But even if an appropriate staff development programme is in place, academics need to see that putting effort into changing their teaching practice is valued and that the effort is rewarded.

Seeking to understand the context at Bournemouth

The development of online learning at Bournemouth has been underpinned by gaining a greater understanding of the motivation of lecturers to use learning technologies. Lecturers' views were gathered through a series of meetings. One focus group style meeting with eight lecturers was held to discuss conceptions of online learning and to seek their views on what the University should be doing to promote its use. Some were experienced users of learning technologies, others had little or no experience and they represented a range of different disciplines. Further views about the nature of online learning at Bournemouth and the perceptions of lecturers were gathered at the demonstrations of the pilot version of the MLE to senior staff in the academic Schools.

Concurrently with these meetings which specifically focused on online learning, another two focus group meetings were held with nine Programme Leaders, which provided more information about lecturers' perceptions of the challenges they faced. Programme Leaders are lecturers who are appointed to

take responsibility for the academic development of the programme and for leadership of the team of lecturers who contribute to the teaching of the programme. The specific pressures on them, particularly as a result of changing quality assurance methods, are growing to such an extent that it can be difficult to find staff willing to undertake this important academic leadership role. The primary purpose of the meetings was to seek views from them on ways in which they might be supported in undertaking their role but interesting insights were gained into their perception of how leadership of teaching and learning appeared to be less valued by the University than leadership of research or enterprise.

The following sections present an overview of the findings from these investigations and a summary of the ways in which these are being used strategically to put relevant recognition and reward mechanisms in place.

Identifying lecturers' views about learning technologies

Approaches to the use of online learning

When the eight lecturers in the focus group were asked what the term "online learning" meant to them, they gave a range of examples, which revealed initially that they conceived of it predominantly as a tool for knowledge acquisition. One suggested that "learning on the web is no different to learning from a book". However, as the discussion continued, they began to suggest that they also perceived it to be an important tool for developing students' skills, both cognitive and transferable. More examples were given which related to the ways in which students could develop communication and collaborative skills, as well as enhance their IT skills.

Two lecturers had used computer conferencing with their students. Initially, both had used it as a means of providing their lecture notes to students, but one admitted that although all her notes were on the web, she was "not quite sure that this was an advantage". This was because "all I am doing is replicating what I am telling them, and it is taking me double the time to put them on the web". The second agreed with her and reported that she had decided not to make her lecture notes available next year but to use the conferencing tool as a vehicle for discussion and debate, not as a "depository". Another lecturer described how her students had set up their own web site and shared resources through it. Online learning was viewed as one among many tools for teaching. It was referred to several times by the lecturers as "complementary", and "a tool". The primary task for the lecturers was seen to be identifying the learning outcomes that had to be achieved and then making use of different teaching strategies to help students achieve those outcomes. One summarised this view when he suggested that "It (online learning) is a

parallel and not a replacement mechanism and it doesn't suit all subjects, lecturers, learning outcomes or students".

They also suggested that online learning could benefit certain groups of students. Apart from recognising that online learning can support distance learning generally, it was acknowledged that it can also provide access to resources for students who find it difficult to get to the campus, for example, mature and part-time students, and that it could also be used to support students on workplacement. There was also some recognition that other individual preferences might be met. Online learning was seen both as providing an opportunity for those who found it difficult to voice their opinions in seminars, but also possibly as a limitation for those who were good at face to face debate.

However, the lecturers were concerned that students, who came to university for the social experience, would start to question the value of a programme at Bournemouth if they came to a campus university and found much of the learning undertaken online. The concept of the student as paying customer of the university was also evident, one lecturer reported that "I have noticed over the past three to four years an increase in students demanding one to one relationships. If they don't get it in the seminars, they will go and stand outside your door until they do get it".

Encouraging the use of online learning

The lecturers were then asked what factors encouraged or hindered greater use of online learning at Bournemouth. The ones they identified included the need to see the University's overall strategy for online learning, having the time and resources to engage with it and feeling supported in their attempts to use it. These were similar to those identified in other studies (Bottomley *et al.*, 1999; Collis and Moonen, 2001).

The strategic direction for online learning at Bournemouth was questioned several times during the interview. There was a suggestion that the strategy was neither clearly articulated, nor was there an obvious rationale for its use. Furthermore, some existing online developments were criticised because they appeared to have been introduced without thought for how they should be used.

Support for developing online learning

None of the lecturers suggested that online learning should not be part of the University strategy at all, but there was a strong feeling among them that its use should be regarded as complementary to face to face teaching. The choice of when and how to use it should be left to the individual lecturer. They did recognise that perhaps they did not know enough about how it might be used most effectively and that it was difficult to find out what was going on in

the rest of the university. There was strong agreement from the group with the lecturer who said that she had never been in such an isolating job.

They recognised that there was a need for more support to help them use online learning. A specific kind of support was referred to, in which technical expertise was combined with the ability to design curriculum support materials. The term “consultant” was used, implying someone to whom you could hand over your subject content and who would not only turn it into an online resource but also give you guidance on the best way of using online learning to achieve your goals. This was linked to the idea of recognising that lecturers should be valued as specialists in teaching and was contrasted with the recognition given to those undertaking research. One lecturer described this rather vividly, “That’s important in terms of how you feel valued. There is a tendency, certainly in my School, if you are not doing research you are looked on as if you are something on the bottom of someone else’s shoe, but actually, there are people doing research who really shouldn’t teach”.

Ease of use of the technologies

There were relatively few concerns expressed about actually using the technology itself. The more technically knowledgeable innovators expressed concern about narrow bandwidth and the need to accommodate a range of web browsers, which prevented easy access to online resources by students from off-campus in the short term. The scale of facilities currently on-campus was also recognised as a limiting factor. One lecturer recognised that just putting lots of material on the web was resulting in students printing it out, but he could see that his ideal of being directly online with students in a classroom required more terminals in more seminar rooms than available at present. The cost of continually updating IT equipment was also recognised as a constraint. The need for students to be able to upload their own web-sites to show-case their work was considered critical in several Schools.

Pedagogy of online learning

As the discussion above indicates, given the commonality of conceptions of learning and teaching afforded by the vocational nature of the disciplines taught at Bournemouth, there appeared to be few subject areas where online learning was regarded as totally inappropriate. Lecturers would seem to support its use, providing it complemented more traditional approaches in a balanced approach. It was recognised that it could contribute to knowledge acquisition and concept formation and that it could facilitate collaboration among students, as suggested by Coomey and Stephenson, (2001).

The principle negative pedagogic factor attached to online learning appeared to be that it could lead to the reduction in face to face contact between lecturers and students, which might be detrimental to the

development of students' vocational skills and might alienate students looking for the campus experience.

An even clearer expression of the underpinning value of a constructivist approach to learning was expressed during the meetings to demonstrate the new MLE which was criticised for appearing to present a very transmission focused model of teaching. Lecturers asked "Is it just an electronic notice-board" and "Where does the learning come into it?" or "How can interaction in the learning and teaching process be made more evident?" and commented that "It looks very content driven". In the light of this, they sought reassurance from the MLE developers that they would consider how to design in opportunities for interaction to take place, and include spaces for collaborative activity and where students could display their best work on their own web-sites.

Programme Leaders' views

A programme at Bournemouth comprises a number of units of study arranged by academic level leading to a University award, for example, a bachelors or masters degree. The role of Programme Leaders is an important one and it has become increasingly challenging as they are expected to encourage their team to incorporate changes to teaching, assessment or student support processes, including developing more online learning. However, it has become increasingly difficult to motivate lecturers to take up the role, so meetings were held with them to determine more specifically their perceptions of the role, both its positive and negative aspects, and then ask them to identify how the University could begin to address these issues.

The discussion in both groups revealed concerns about their relationships with three different groups whom they identified as the major stakeholders of their Programme. These were the students, academic colleagues and other staff within the University, either administrative colleagues within their own School, or others referred to as "management" or "the organisation".

One of their main concerns was knowing how to provide appropriate support for the needs of an increasingly diverse range of students, whom they described as appearing to be more dependent than in the past, and also more demanding.

A critical factor identified when dealing with academic colleagues was the fact that they often had to engage in a lot of persuasion and negotiation to achieve desired changes to teaching or assessment strategies. It was sometimes difficult to achieve what they wanted because they were not usually the line manager of any of their Programme team members, so could not influence an individual's behaviour through the appraisal process. They

relied on working with those whom they identified as “team-players” and tended to side-line those who were not.

They recognised that the administrative burden of the role was eased considerably by maintaining a close relationship with their Programme Administrator, but were often uncertain about where the boundaries lay between their role and that of the administrators.

Despite their concerns, most enjoyed being academic leaders and having the opportunity to “put their stamp” on the Programme. The role was regarded as a very visible one, and provided intrinsic rewards, “being known as a good leader is enormously satisfying”. However, it became clear, that due to the devolved nature of the University, monetary or other incentives for taking on the role varied across the seven Schools.

The perception of greatest relevance to this study was the one that the role was not as highly valued by the University as other roles involving leadership in research or enterprise. In common with the lecturers interviewed about online learning, Programme Leaders also suggested that the University should be investing in incentives to make involvement in learning and teaching innovation and leadership more rewarding. This would encourage the perception that the University regarded this activity as being on an equal footing with involvement in research and enterprise.

Using the findings

Informing the development of an appropriate learning and teaching strategy and its implementation

The analysis of this data provided some useful insights for further action. The starting point was to update the University’s Learning and Teaching Strategy to incorporate more appropriate terminology which reflected the importance of collaborative learning and to shortened it to just four key priorities that could be explained more readily to academic staff. Emphasis was placed on the need to extend flexible learning opportunities, of which online learning was identified as one component but was not synonymous. The need for greater flexibility in learning and teaching as a way of securing greater efficiency in teaching delivery was also emphasised, but it was not suggested that online learning alone would achieve this, but that it could be achieved through a broader approach to curriculum re-design.

The findings also had implications for the implementation of the strategy to promote the further use of online learning through the development of the in-house MLE project. The development of the various components of the MLE was re-scheduled. Greater priority was given to developing a conferencing facility rather than concentrating solely on document publishing, in order to

facilitate the creation of a learning environment that facilitated participation and collaboration, as well as knowledge acquisition.

Informing the development of appropriate recognition and reward mechanisms to increase the status of teaching

A range of mechanisms has been established at Bournemouth to demonstrate that teaching is valued equally with research and enterprise activities. These include creating Learning and Teaching Fellowships, paying for membership of the Institute for Learning and Teaching in Higher Education (ILTHE), establishing a Centre for Academic Practice to promote pedagogical research, planning a development programme for Programme Leaders and continuing to fund learning and teaching projects which are linked to the University's strategic targets.

Many UK universities were prompted to address the issue of recognising and rewarding lecturers for the effort of engaging with the agenda for learning and teaching as a result of HEFCE's Teaching Quality Enhancement Fund (TQEF) (HEFCE, 1999). One of the more common ways of doing this has been to establish a teaching award scheme similar to those popular in the United States (Gibbs, 2002). This is one of several strategies developed at Bournemouth, but instead of using the TQEF, funds from the HEFCE Rewarding and Developing Staff in Higher Education initiative (HEFCE, 2002) were used to establish six annual Learning and Teaching Fellowships. This demonstrates a synergy between Bournemouth's strategies for learning and teaching and human resources development that is unusual, according to Gibbs. He suggests that "An analysis of the (mainly emerging) HRD strategies submitted by institutions to HEFCE in 2001 did not reveal significant evidence of reward mechanisms for excellent teaching even when such mechanisms were already contained in institutions' existing learning and teaching strategies. At present HRD strategies appear to be operating in parallel, rather than in synergy, with teaching improvement strategies". (Gibbs, 2002, p. 1). The criteria for Bournemouth's annual Learning and Teaching Fellowships are drawn from the United Kingdom's National Teaching Fellowships Scheme and one of the aims is to encourage lecturers to apply for the internal award to build up their confidence in applying for the National Scheme.

Further recognition of the value attached to professional development for learning and teaching is demonstrated through the University's support for those achieving membership of the United Kingdom's Institute for Learning and Teaching. Again, TQEF is used to fund the first year's subscription of everyone who gains membership.

The purpose of the Centre for Academic Practice is to encourage the development of research into learning and teaching activities and to

provide a focus for promoting and co-ordinating pedagogic research across the University. Its main aim is to develop a wider and more inclusive research culture across the University as a whole, including encouraging research activity by staff in support services as well as in the academic Schools. Collaborative research between lecturers and support staff is encouraged, for example, to investigate students' experiences of online learning, or between staff at the University and those in its Partner Colleges to investigate the factors affecting the delivery of Higher Education in a Further Education environment. Activities include workshops on writing for publication and research methodologies and seminars to discuss research in progress.

Senior staff in management positions at Bournemouth have had the opportunity of taking part in a management development programme which has been funded from the HR Strategy funds, but for the first time in 2003 a leadership programme for Programme Leaders will be offered, with the content and approach designed according to their feedback.

The value of action research as a method of inquiry

Action research was adopted for the inquiry because the starting point for the research was grounded in a real-world issue, it was attempting to identify the factors influencing the adoption of online learning in a vocational university. If the findings were going to be useful in improving practice, they had to be derived from a collaborative approach involving the author not as neutral observer but as participant in the research. Action research takes its strength and value in researching professional practice because theory is generated from practice (Coghlan and Brannick, 2001; Ellis and Kiely, 2000; Greenwood and Levin, 1998). It is also a cyclical process of planning, acting and evaluating. This paper considers findings from the first cycle of the research activity.

The tensions arising from undertaking research in my own organisation were similar to those identified by Coghlan and Brannick (2001). All the way through the study it was often difficult to define the research question separately from the management task of revising the learning and teaching strategy. This led to the strong possibility that that bias influenced the findings. In the data collection, lecturers may well have told me what they thought I wanted to hear, and in the analysis, I may not have been sufficiently objective. There was also the tension between the need to present findings in the public domain while respecting the confidentiality of those involved. The process of undertaking the research did lead to greater insight into relationships with colleagues and an understanding of the differing perceptions about the nature of work in a vocational university from the view-point of academic staff and support

staff. This insight has led the development of work in the second cycle of the research to investigate further the nature of the academic culture and the climate for change at Bournemouth.

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Motivating the Professoriate: Why Sticks and Carrots are only for Donkeys

by

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Government decreases in funding to universities accompanied by increased accountability measures for both teaching and research have resulted in tertiary management structures consistent with these developments. Universities have historically relied upon the active and collegial participation of their academic staff to achieve the goals and aspirations that have driven the sector for generations. This paper utilises psychological motivation theory and research to examine developments designed by management to promote faculty productivity. We challenge the naive implementation of change strategies that do not appear to be based on theory and/or research. Strategies are proposed for monitoring such changes in policy and practice within well-established social science paradigms to ensure achievement of desired ends rather than undesirable negative effects upon the university's capacity to fulfil its role in the creation and transmission of new knowledge.

“One of the best things about working for a university is that you are encouraged to do a great deal of intellectual exploration. They also let you try out your ideas on unsuspecting undergraduates.” (Introduction to an Internet course outline by an Assistant Professor at a US university)

“Over the past three years the Government has raised research and development investment, formulated new tertiary education strategies, established centres of research excellence, and backed research commercialisation by setting up the Venture Investment Fund.” (New Zealand Minister of Research, Science and Technology, *Transforming New Zealand. Research and innovation-drivers of growth.*)

“I want to be a clinical psychologist and do research because I believe that individuals’ emotional problems can be solved by changing their perception or thinking about their world... I hope I could help people to solve their problems and have a better life.” (Autobiographical statement written by a non-resident student in psychology starting a Master’s degree)

These three items happened to cross our desks on the same day one week. How can such apparently totally different attitudes, values, and worldviews be reconciled? Do academics see themselves as participants in a glorious governmental plan to build a “knowledge economy”? Do the policy goals of government determine the strategies of university administrators or the dreams of students? Do tertiary management structures promote these policies? How well understood are the goals and career aspirations of academic staff in universities, and what do we know about motivation in general that can be used constructively to support individual academic scholarship and productivity? This paper examines approaches to motivating the professorial contribution to higher education within contemporary economic contexts, reconciling psychological and political realities and considering opportunities within this social climate that might facilitate the attainments of aspiring younger scholars.

Background

In the traditions of the world’s great universities, the professoriate represents the heart both of the discovery of knowledge and the transmission of that knowledge to the next generation. Academics are drawn to higher education by a passion for their discipline and scholarship. Those who achieve

the highest rank of the professoriate do so through international peer recognition for their contributions to research and teaching. The professoriate has relied minimally on monetary gain for its intellectual industriousness and dedication to scholarly standards. Albeit somewhat grudgingly, society has nevertheless accorded such scholars a level of respect, privilege, and comfortable financial support, evidenced by the existence of the university as a “sanctuary” (Sassower, 2000) that has endured since the 9th Century. The very essence of the university is as a bastion for unconditional pursuit of esoteric interests.

In recent years, however, the academy and the professoriate have come under increasing scrutiny and been confronted with demands for relevance, accountability, and productivity in a language often foreign to the world of traditional scholarship. The rhetoric of business has permeated the structures and processes of the academy (Olssen, 2002). Universities are expected to meet the demands of governments to contribute directly to economic growth at a time when public funding has declined in relationship to the costs of running the university. In our country of New Zealand a vice-chancellor recently spoke disparagingly of “blue sky research” as an unaffordable privilege, not the core of intellectual existence. Within this context, academic leadership has increasingly been conceived as demanding managerial expertise and political connections (*e.g.*, Yount, 1996). Whilst once the university president would be an internationally known scholar who had made his or her way through academic achievements and leadership, those chosen for this role today are increasingly likely to come from outside the academy – from business, the military, or government.

Private fund-raising, business partnerships, and the commercialisation of research all promise additional resources, but come with their own peculiar and specific forms of accountability which may or may not mesh with the individual interests of the faculty. Academics find themselves confronted with agendas driven by contractual agreements with business and industry alongside a new era of negotiation over intellectual property and knowledge capital. Nor is teaching immune, as the design of degree and professional programmes are dictated by student markets rather than the best ideas of leading academics, with the annoying labelling of students as customers – James (2001) has suggested that students as patients would be a far better analogy! A recent example of economic pressure placed on universities to increase productivity to maintain public support is the international movement toward Performance-Based Research Funding (PBRF). As governments label funding an “investment” in the process of generating knowledge, awards are increasingly competitive and dependent upon the research outputs of the faculty of an institution (OECD, 1997). This pressure is then transmitted down to faculty and their productivity, sometimes in a threatening way.

As universities are challenged to curtail costs while enhancing the quality of teaching and learning, the academic staff are asked to do more with less – and in ways that differ significantly from the traditional practices of higher education. Smith (2000) argues that today's university copes with diverse demands despite limited resource precisely because of the collective responsibility of a faculty who willingly take on accountability for generating and transmitting new knowledge. Clearly, the collegial structures of a modern university differ from the hierarchical structures of some corporations, but even more so from the corporate interface between the profit motive and employee incentives. To meet output demands such as PBRF, the professoriate has become the focus of managerial policies designed to motivate, support, re-energise and reward towards achieving increased research and scholarship lest the institution lose market share of intellectual property and student enrolments. There is little or no empirical research on faculty motivation to guide management policy. But a good theory can be eminently practical. In the following section we draw on general principles from the psychology of motivation and competent performance in order to highlight issues that might be considered by administrators.

What actually motivates academic faculty?

The faculty of the university are experts in their discipline who have chosen careers within the tertiary system. There is no shortage of alternatives: today most specialisations allow for the pursuit of careers outside the academy, generally at an exit point from tertiary study far earlier than is required for employment as a lecturer at a university (e.g., accountancy, engineering, clinical psychology, or biochemistry). Personal career choices may be the result of intrinsic interest in a topic area, passion to learn more and become expert in the field of enquiry, and/or a desire to teach and thus pass on love of learning to the next generation. What motivates lecturers who have undertaken study beyond undergraduate to graduate school-postponing earning reasonable incomes and extending student loan indebtedness for many years – in order to undertake a university teaching career? What motivational mechanisms enable this sustained delay of gratification? And, if mechanisms such as PBRF are to achieve intended results, under what circumstances would a faculty subsequently be motivated extrinsically by monetary incentives or other external reinforcers?

One issue that needs to be considered in analysing academic performance is the difference between intrinsic and extrinsic motivation – doing something for the love of the task *versus* doing something in order to earn some disconnected reward. Another important issue is the concept of achievement motivation – striving for some form of success and avoiding failure. A third consideration is that essentially all motivation is related to hedonism – feeling

good, however, involves more than approaching rewards (carrots) and avoiding pain (sticks). Some individuals seem to be what is now known as reward dominant – that is to say they are more influenced by acquiring rewards than receiving punishments – and others are in need of avoiding discomfort.

Intrinsic versus extrinsic motivation

One of the longest-standing debates in motivation theory is whether imposing an external reward contingency on activities that are intrinsically rewarding will actually interfere with or reduce response output, especially when the external rewards become less available (Evans, 2001). Generally it is agreed that while the negative re-bound effect is not a universal phenomenon, external contingencies shape intrinsically motivated behaviour in unanticipated ways. In academia, passion for one's chosen area is not sufficient to motivate scholarly output, since it is perfectly possible to read and study a loved discipline without contributing any new knowledge of one's own. Thus we need to consider patterns of internal (satisfaction) and external (salary increase) rewards and the criteria for applying them. In one faculty survey, Leslie (2002) found that salary and job satisfaction were uncorrelated. This same survey demonstrated that faculty "are motivated to teach, spend most of their time teaching, prefer that they be rewarded for teaching effectiveness, but that institutions may actually reward them for something else". (p. 68)

A possible solution is to apply external rewards (those under the institution's control) less to what faculty would be doing anyway and more to those activities that yield intrinsic satisfaction to scholars above and beyond essential engagement with the chosen discipline. We would argue that the following categories of reward represent this intermediate level of personal satisfaction, since they are outside the range of material rewards that are normally available to tertiary administrators (such as tenure, salary increases, and promotion):

Desire to advance one's field: Interest in a scholarly topic is not sufficient to motivate output, but wanting to make a contribution seems to be. Sometimes this might be in the form of wanting to be cited or quoted by others, sometimes it is in the form of wishing to disprove or demolish some other scholar's arguments.

Peer recognition: Closely related to this is the need for recognition from one's peers. These will be those whose work one reads, whom one meets at conferences, and whom one recognises as having influenced one's own thoughts and discoveries. Such peer recognition is substantially more important to academics than recognition within the university but outside one's discipline (Leslie, 2002).

Pride in seeing one's name in the marquee lights: We have never encountered a fellow academic or graduate student who does not like to see his or her name in print! All academics we know show off a new book or reprint when it arrives, read over things they have written when first published, or look for their name in the index of a new book. But for behaviours to be reinforced this way they have first to be emitted. Thus effective mentoring as graduate students and junior faculty in specific skills such as how to deal with editorial rejection is essential.

What is so simple about small academic vanities, therefore, is that they can be easily fostered by less tangible institutional incentives such as good technical support, study leave, increased lab space or computer facilities, and an administrative culture that accepts as givens the funding of collegial exchange, international colloquia, conference attendance, and so on.

Motives as goals rather than drives

A common form of motivational theory in psychology argues that motivation can be thought of as an internal need that impels the individual towards action. Achievement motivation in particular is thought to be the result of a conflict between striving for success and avoiding failure. Success-oriented individuals experience pride in winning and in competing (McClelland, 1961). An alternative and more recent form of motivational theory is the idea of motives as goals that entice individuals towards action. It is well demonstrated that when individuals espouse *learning* goals they are more likely to use self-regulatory strategies and focus on meaningful aspects of the task, such as good quality research. Conversely, when individuals adopt *performance* goals, such as having a certain number of refereed publications, their scholarly behaviour tends to be more superficial (Ames, 1992). These relationships are somewhat influenced by whether the individual approaches success or avoids failure. Performance-oriented individuals who approach success are likely to be competitive and adopt strategies that produce results. Performance-oriented individuals whose goals are to avoid failure, engage in reduced effort and less task persistence; by not trying very hard such individuals generate face-saving excuses for doing poorly (Higgins, 1997). To generate productive scholars who do excellent and meaningful work, therefore, one would wish for academics who do not, or are not made to, fear failure and who are encouraged to focus on what their work can contribute rather than the overall level of performance.

Achievement can be purely for the individual or for the sake of the group, and social goals have a very strong influence on most people. In academic contexts we have seen many examples of scholars working industriously for the sake of a small research team or lab, but rarely do academics suggest that their efforts are for the good of the entire university. University staff may even

take pride in not contributing to the total organisation, particularly if they are cynical regarding the values of the university administrators. Social goals of wanting to be liked and accepted by peers, wishing to share, and enjoyment of respectability impact academic achievement in complex ways. Thus, academic contexts that favour individual competition and autonomy may not suit well those individuals who, perhaps by virtue of gender or culture, have much more prosocial and less individualistic values. Winter and Sarros (2002) provide evidence that the key to improving motivation towards desired research and teaching goals lies not so much in measurement of productivity as it does in constructive, supportive and empowering feedback on expectations within the context of academic values. Doring's (2002) research suggests that annual performance reviews confidential to the individual will be more likely to be associated with positive impact on academic behaviour than strategies that risk public humiliation or loss of status.

Self-worth theory

In any group that values superior academic competence, an individual's self worth is likely to be measured by certain public performance criteria (such as grades at the undergraduate level), regardless of whether that person is learning or performance oriented. Universities raise this social premium on competence much more dramatically, with relatively meaningless words such as the "pursuit of excellence" becoming a mantra for many a university president's discourse. Success can be defined in terms of meeting one's own personal standards of excellence, which is productive for sustained academic work, or it can be defined in terms of doing better than other people, which results in the use of failure-avoidance tactics in order to avoid the appearance of being incompetent.

Tactics that reduce the threat of failure include reduced effort and what is known as self-handicapping behaviour (Thompson, 1993). In this latter category are a variety of behaviours that are seen in academic communities and which provide some scholars with a ready excuse for potential failure, such as procrastination and establishing unrealistically high achievement goals. A related strategy described by psychologists is that of defensive pessimism in which individuals manage their anxiety by maintaining an unrealistically low expectation of ever succeeding, or devaluing the importance of the activity. Thus in academia we encounter some faculty who will dismiss the value of scholarly outputs or deny that they are in a position to be productive given the high level of alternative demands on their time.

Reward systems

Every university has an established set of conditions defining the grounds on which faculty will be evaluated, judged successful and allocated rewards.

These conditions interact with the goal-related variables that are inherent to the individual faculty member's motivational system. Thus, while each person's motivational system will be different, the reward contingencies within a given tertiary institution are fixed. Whether the system can be individualised to maximise the variables that pertain to individual faculty is a

Table 1. **Strategies to enhance faculty productivity**

Strategy		Unintended negative impact	How to monitor
1. Reward research productivity by providing individuals/units with research allocation relative to prior year productivity.	1.1	Institutionalise existing patterns	
	1.2	Fail to enhance capacity	
	1.3	Differential impact upon different disciplines/areas where outputs timelines differ	
	1.4	Fail to support/nurture beginning researchers and future stars	
	1.5	Discourages time/effort to be a good teacher	
2. Socially reinforce faculty by posting copies of publications publicly/ punishing non-productive faculty by absence of postings	2.1	Institutionalise existing patterns	
	2.2	Inadequate information may lead to inaccurate picture	
	2.3	Alienate both productive and non-productive faculty	
3. Increase teaching loads of non research-productive faculty	3.1	Industrial grievances	
	3.2	Institutionalisation of sub-category of non-productive staff	
	3.3	Communicate devaluing of teaching	
	3.4	Teaching becomes non-research-led	
4. Reduce teaching loads of non-research active faculty to provide dedicated research time	4.1	Resentment by research-active faculty	
	4.2	Expense	
	4.3	Continued lack of productivity (if time is not the source of the problem)	
5. Pairing non-research active staff with a research-active mentor	5.1	Expensive and may not be regarded as good use of time by/for research productive staff	
	5.2	Demeaning to non-research active staff with consequent resentment and low morale	
6. Provide funding for revising masters and doctoral theses for publication	6.1	Will have little to no impact if staff who are not research active also do little supervision	
	6.2	Raises funding expectations to unrealistic levels	
7. Develop a departmental plan to increase research productivity	7.1	Individuals who are not productive may be precisely those who neither participate or "buy in" to plan	
	7.2	Department plan may have no validity	

fundamental question for effective management. Currently it is our perception that little or no effort is made to individualise the reward structures, but that at different times and as different governmental and social policy pressures impinge on the university, different strategies are attempted, which results only in disadvantaging one group while advantaging others. Table 1 provides examples of the kinds of strategies that we have heard proposed in various forums by those seeking to increase academic productivity.

No doubt these were well-intentioned ideas. However, there is scant empirical evidence that any of them has actually resulted in changes in faculty behaviour or increased research productivity. Further, we note that these are indeed “ideas” and that administrators who propose them seldom have a social science understanding that an intervention can have unintended as well as intended effects. In Table 1 we have suggested a number of unintended negative outcomes that might result from these particular strategies – not to discourage such efforts, but to heighten awareness of the variables that must be monitored if we wish to demonstrate effectiveness of the intervention. The column labelled “How to Monitor” is left blank but would require conceptualisation and choice of appropriate methodologies to address any of these issues. Perhaps one of the major ironies of such approaches is that a social institution dedicated to the pursuit and validation of new knowledge – our universities – continues to pursue such interventions based upon belief and assumptions rather than seeing these as empirical questions to be validated through evidence. It would be a useful exercise for management to analyse conceptually what could emerge as unintended negative outcomes and to design strategies to monitor such outcomes, rather than naively assuming that only the intended positive result will eventuate.

Of course, governments value contestable approaches to funding research, inevitably adopting a strategy of research competitions based upon limited pools of funding for which established scholars must compete. PBRF is perhaps a natural adjunct to this strategy, with the entire tertiary institution required to demonstrate productivity in order to retain funding for research and not be relegated to a “teaching-only” status. Instead, governments could commit to funding all meritorious proposals. While that may seem to be an expensive strategy, it may be less so than creating performance-oriented researchers competing with each other and producing unintended negative outcomes such as large numbers of competent but disappointed and frustrated scholars. Harman (2000) has also documented potentially serious negative consequences of the Research Assessment Exercise (RAE) in Britain, which include changing the nature of selected scientific literatures in ways that could be quite detrimental to the dissemination of new knowledge and the practice of sharing that knowledge among the scientific community, and

especially damaging in the humanities (Bernard, 2000; Harley, 2002). The RAE is both an accountability assessment of research quality as well as a managerial tool for the allocation of research funding, as emphasised by Thomas (2001). His analysis of interview data collected in the mid-1990s notes the risk that this exercise may marginalize some staff whose see their primary contributions as teaching. Should these staff feel de-valued – at a time when our universities must cater increasingly for diverse student needs – the consequences could be to the detriment of students and the system as a whole.

As Covington (2000) has written, strategies such as PBRF arise from “a popular misinterpretation of drive theory, which assumes that [faculty] will comply with prevailing [institutional] demands if [administrators] can only provide the right rewards or threaten sufficient punishments, and that the fewer the rewards offered, the harder faculty will attempt to attain them”. (p. 185)

Threats to achievement motivation and barriers to productivity

In addition to motivational patterns that can be fostered, there are emotional and motivational barriers to sustained productivity, which administrators need to be aware of. As mentioned, we know that some people will be strongly motivated by the acquisition of rewards. For others, the avoidance of punishment is a stronger influence. Failure avoidance can be a powerful driver of human behaviour such that individuals will cease trying in order to avoid any negative judgements by oneself and others that might accompany lack of success despite effort. This psychological construct helps explain why a journal rejection letter can be a powerful inhibitor of future publication submissions, rather than a prompt to revise and resubmit. It also suggests that various reward systems – put into place to elevate the achievements of some – could be openly rejected by others, who would then refuse to contribute even at prior levels of lower but nevertheless meaningful contributions to research outputs. Otherwise, academic staff (faculty) would risk public embarrassment through comparisons with their more productive colleagues. Again, these are social science phenomena that can foreshadow unfortunate negative outcomes of the best-made plans of senior managers and governments intended to drive productivity upwards.

Reactance and cynicism

A well-established principle in social psychology is the phenomenon of reactance: Persons who feel that they are being manipulated or controlled will resist such external controls as much as possible. Given that the concepts of autonomy and independence of thought and action are highly regarded values in academic settings, one might suppose that reactance will be particularly

strong when formal contingencies designed to increase faculty productivity are imposed.

Other barriers that seem especially germane to academia are feelings such as cynicism, learned helplessness, and the undermining of the enthusiasms that once motivated high levels of productivity. It is well established that social approval influences behaviour in direct proportion to the value of the social agent to the individual. Hence, the loss of trust in the senior management team of the university could have serious consequences, particularly given evidence that trust may be easier to destroy than to create. Slovic (1999) notes certain fundamental mechanisms of human psychology:

1. Negative (trust-destroying) events are more specific and thus more salient than positive (trust-building), but indistinct, events.
2. When events are well-defined and receive our attention, negative ones carry much greater weight than positive ones.
3. Sources of bad (trust-destroying) news are seen as more credible than sources of good news.
4. Once initiated, distrust tends to perpetuate and reinforce further distrust because it results in behaviour that inhibits the kinds of personal contacts and experiences that are necessary to overcome the distrust.

Table 2 provides an example. This quiz, originating from a faculty union, was printed in the university's student newspaper in anticipation of the selection of a new Vice-Chancellor. The cynical interpretation of various behaviours evident in the questionnaire illustrates the overriding impact of loss of trust after forced redundancies. Doring (2002) argues that academics who see themselves as victims of change rather than change agents will be less likely to stimulate student skills in debate, challenge and thinking, resulting in negative outcomes for the quality of learning for students.

Time distribution

Unlike the common behavioural paradigm in which work output is the metric of choice (response rate), research productivity is far more complex an activity than simply spending time in research. Time spent must yield meaningful scholarly results, broadly defined. According to behaviour analysis, specific contingencies of reinforcement imposed on faculty should predictably determine the relative amounts of time spent in teaching and research. Indeed, a prominent explanation of reinforcement contingencies in contemporary behavioural science is that what response consequences do is influence how an individual distributes time. In academia, the major time demands are, initially, classroom teaching and direct instruction of students, along with its associated preparation, reading, designing course materials and grading work and giving feedback to students (Fairweather, 1996). These

Table 2. Example of satirical faculty union commentary in a student magazine

Quiz on Suitability for Being the Vice-Chancellor
<i>Instructions: Test your suitability for the position with this foolproof quiz.</i> Question 1. Students are: a) A liability and this university would run better without them b) Their fees pay my salary so I think we might have an obligation c) The reason the university is here is to prepare our best and brightest for their chosen careers Question 2. University academic staff are: a) A liability and damn uppity with it b) An employee of the university c) The backbone of any university and they are our most valuable asset Question 3. Constructing fabulous buildings is: a) A visible demonstration of my glorious legacy to this university b) To accommodate my office and perhaps classes for students c) Less important than having excellent staff and teaching resources Question 4. My management style is: a) "If I want your opinion, I'll give you one" b) "Leadership and constructive change" c) "My job is to fully support academic staff to make this the best university possible for students" Question 5. This University is: a) A business b) A university with a minor commercial research focus c) A centre of higher learning, research and a bastion of academic freedom IF YOU CHOSE A FOR ALL THE QUESTIONS, THEN WELCOME TO OUR UNIVERSITY! IF YOU CHOSE B, WE MIGHT CONSIDER YOU, BUT IF YOU CHOSE C, DON'T CALL US, WE'LL CALL YOU – AS THEY SAY.

activities tend to relate to specific deadlines and time requirements and thus cannot be easily reassigned, especially for less experienced faculty. A second time demand is in various forms of administration, committee work, supervising others, general talks – all the activities usually described as “service”. The third and most easily diluted activity is designing research, reading and exploring issues, conducting studies or supervising others in doing so, managing a lab, writing research grants, sorting and analysing data, and writing articles, chapters, and books for publication.

It is a common joke among faculty during university vacation periods that the institution is a really great place when the students are not around. Of course they rarely mean that literally, since teaching and working with students must be a significant part of any academic's life and enjoyment – it is the administration they are happy to give away (Staniforth and Harland, 1999). Yet there is a common perception that the really important and valued aspects of being an academic are one's scholarly activities of researching and writing. When academic staff discuss “workload,” they generally mean only *teaching* loads, since productive research work is what would fill time if the time spent

on classroom teaching were diminished. The ideal state of affairs for many university faculty is the sabbatical or the teaching free semester – when one can get down to the real work of academia. Thus the challenge for most faculty is how to apportion time when there is a certain amount of teaching that is required. The challenge for tertiary administration is to ensure that faculty productivity involves some appropriate balance of the production of lively and informed minds (teaching) and the production of new knowledge (research, scholarship, creative performance). Academic staff often argue that they are not research productive because their teaching and service loads are too heavy. Yet, some faculty still manage to apportion time to meaningful research and writing despite similar workloads. What it is that allows our academic “stars” to distribute the hours in the day in such a way that research gets done and disseminated?

There seem to be a number of factors that allow people to apportion their time towards research activities, and the task for the manager might be to assist individual scholars analyse their required time *distribution*. One modification is to spend less time on teaching, perhaps by becoming confident that a less than perfect job will do, or learning efficient strategies for preparation and marking. Another necessary skill is to be able to work consistently on activities for which there are no immediate deadlines. In the research arena only the pressures from an editor for a promised work or the deadline on submitting a grant application represents real pressures to finish a task. This is quite different from the contingencies of grading, lecturing, and meeting with students, for which there will be immediate consequences if not carried out on schedule. Finally, for writing and research in some disciplines – and perhaps for some personalities – it is particularly important to allow “flow”. This is a state, defined by social psychologist Csikszentmihalyi (1990), in which people become utterly absorbed in a task, giving undivided attention to what they are doing, losing track of time and space. People learn best and experience joy when they are in flow, and are unmotivated by threat of punishment. University administrators may need to examine whether semesterisation, modular courses, summer schools, block teaching and other managerial and physical plant efficiencies, inadvertently reduce engrossed scholarly commitment.

Anxiety and stress

In addition to variables that we know to influence motivation, there are certain specific conditions in which increasing motivation does not lead to enhanced performance. A good example of this is when motivation to perform is increased so much that it generates anxiety and stress that interferes with performance. In general it is thought that optimal performance derives from

an intermediate level of motivation, with too much or too little both being detrimental.

Threats, punitive strategies, using shame and humiliation of faculty, redundancy exercises in which individuals' continuation in employment is judged on their recent research productivity, are all circumstances likely to generate anxiety in academic staff. In a fascinating study of programme closures within universities, Eckel (2002) documented that many such closures were capricious rather than strategic. While the need for budget cuts may have been real, where these cuts were made was often based upon what administrators could get away with rather than what was most justified. In such instances, the resulting redundancies caused pain, disruption, and hard feelings with little actual financial return.

Anxiety interferes with performance, especially of complex tasks such as scholarly production. It also leads to strategies in which failure-avoiding academics may blame their lack of productivity on others. We have heard many such defensive comments over our years of experience: faculty may argue that they are forced to teach an overload rather than be able to do research and publish (e.g., "This is a badly managed university"). Others may resort to distortions regarding the actual quality and worth of their own scholarly output (e.g., "I publish in non-refereed journals because I want to reach a broader audience"). Some may pass negative judgment on the productivity of others, devaluing their work as insignificant in comparison to "real" scholarship.

Skill deficits

Finally, a major reason for low research productivity is simply that some faculty lack critical skills to implement and publish research. In most organisations performing diverse activities, personnel can be assigned to different tasks according to demonstrated skill levels or training. But the research productivity we do so need to sustain and grow in the management of a university assumes that the appointments process assigns people of equal starting skill to the various disciplinary divisions. Skill deficits may be particularly relevant in tertiary settings in the United Kingdom, Australia, or New Zealand, where doctoral preparation, especially outside the natural sciences, still tends to focus heavily on the production of a single major piece of research with few mentoring experiences across the range of activities defining the future life of an academic (Deem and Brehony, 2000). To redress this isolation from a research culture requires graduate schools to teach mindful learning strategies to enable students to actively maximise the benefits that can be extracted from an academic environment. At the same time, graduate faculty need training in the nature of effective research supervision and how to promote the image of graduate students as "junior

colleagues” – to quote a concept specifically developed by the highly successful clinical psychology programme at the University of West Virginia.

After graduate school, and upon appointment, we rely on informal networks of mentoring among colleagues to continue the educational process. Thus, standards that only recognise publishing as sole or first author will have unintended consequences that are not difficult to forecast. Could some funding regimes ultimately eliminate existing incentives for essential mentoring activities that enhance junior scholars’ self-efficacy beliefs? How then would universities ensure supports for capacity-building among its less research-experienced staff, or even those who will be its future academic stars? Fortunately, some universities make a special point of celebrating those faculty publications in which *students* are co-authors. This was true, for example, at the State University of New York at Binghamton, although ironically the same campus found it difficult to promote to full professor someone whose publications were entirely second authorships. The scientist in this situation expressed no great interest in conducting his own programme of research, but through his skills in mentoring post-graduates, in research design, and statistics, had established an effective working relationship with a colleague who was more creative but less methodical. Is it really possible to say in these circumstances who ultimately makes the most important contribution to knowledge?

Implications: perceived fairness and motivational equity

Goal theory argues, as we have indicated, that the basic impediment to academic productivity is the scarcity of rewards, as this encourages faculty to avoid failure rather than approach success. The alternative is to promote a variety of incentives that recognise faculty members’ progress and development, independent of previous opportunities, training, or status. As not all staff are going to be equally productive and go on to have stellar academic careers, it is important, following this reasoning, to establish conditions of motivational equity. Among the approaches that have been investigated in learning contexts is the setting of individual goals and the evaluation of faculty according to the individual attainment of these goals. This will require university administrators to exercise considerable restraint, resisting the temptation to set universal productivity benchmarks as though one size fits all and as though there is but one standard of academic productivity.

It is unlikely that we can reverse the trends for governments – in their effort to catch the knowledge wave – from attempting to clamber onto lesser swells, such as those of simplistic managerialism, that have already broken at the very time the politicians are hoping to ride them to shore. But a major role for university leaders should be to protect academic faculty from the silliness

and excesses of these discourses, not to embrace them. If it is true that faculty are intensely cynical of management-speak, surely it is possible for academic leaders to avoid promoting the terminology and implicit strategies of government agendas? We do not really understand why – in their efforts to recognise the political realities within which publicly funded universities must operate – university administrators (who should know better) are willing to embrace standards of practice, top-down decision making, review criteria, and reward distributions that are either anathema to the academic scholar or directly counter to industrious, self-determined productivity. Academic staff may be compared to donkeys in traits of stubbornness, in work capacity, and occasionally in difficulty to move them forward, but the parallels cease when contemplating effective rewards and punishments. Much more serious attention has to be paid to the motivational needs of modern scholars: sticks and carrots will not prove to be effective academic management tools. Indeed, they may well be counter-productive and do harm, to the detriment of our universities' capacities to attract and retain the kinds of academic leaders who are the essence of the institution.

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Degree System in Mainland China: Development and Implications

by

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The main objective of our study is to briefly review the development of the degree system in mainland China. Detailed information has been found by studying historical documents. The degree system in mainland China has witnessed rapid development and great changes in the last two decades, notably the introduction of professional degrees. Meanwhile, problems remain such as the imbalance of degree rank structure and poor recognition of the status and importance of professional degrees exist. Socioeconomic factors leading to the changes are analyzed and the reasons and implications are discussed. The study reveals that certain types of economy produce certain kinds of education system, regardless of ideology.

Introduction

Mainland China's degree system has witnessed two changes during the last two decades, i.e. the restoration of a degree system in the early 1980s and the introduction of professional degrees in the early 1990s. This paper briefly examines the developing process of mainland China's degree system and its innovations. The author then goes on to explore: 1) the socio-economic factors leading to the changes, 2) the current problems facing the development of professional degrees. The implications are discussed.

First change: the restoration of a degree system in mainland China

Mainland China's degree system was first introduced by the Guomindang Government in April 1935, known as the *Law of Academic Degree Conferring*. Due to the invasion by Japan and the ensuing civil war, the system did not play its role. Extant documents reveal that from 1935 to 1949 only some (no accurate number available) bachelor's degrees and 232 masters were conferred but no doctorate was conferred. On creation of the People's Republic of China, everything related to capitalism was rejected and forbidden. The degree system, which originated in western universities in the middle ages, was destined not to survive. Consequently, in 1949, mainland China entered a thirty year period without academic degrees, which is rare in modern history. Distinguished scientists and scholars who understood the importance of the degree system never ceased trying to restore the degree system and tried their best to persuade government leaders (almost all of whom were revolutionist). Their efforts resulted in two attempts to restore the degree system.

In 1954, the CCPC (Central Committee of the Communist Party China) issued instructions to set up a degree system and a committee consisting of 13 people was asked to draft a proposal. In those days, political factors were dominant and class struggle was all-important and became the priority of people's daily life. Political movements disrupted work on the draft: the first attempt fell victim of the Anti-Rightist Struggle in 1957. In November 1961, the vice-minister Nie Rongzhen proposed that a degree system should be set up and the proposal was adopted by the CCPC. In May 1962, an eleven-member panel began to work on the draft. After many discussions and modifications the draft took shape in April 1964. But before the draft became law by legal process, the Leftists, who regarded the degree system as bourgeois jurisprudence, came into power, and suspended the procedure (Wu et al., 2001,

pp. 62-63). The successive *Wenhua Dageming* (Proletarian Cultural Revolution, 1966-1977) further pushed the whole country into chaos and anarchy. The extreme leftists such as *Hongweibings* (the Red Guards) defied laws and regulations and government officials could not maintain public order. Even China's first premier, Zhou Enlai had difficulty controlling the chaotic situation. Laws and regulations could hardly be enforced. After Deng Xiaoping came into power, the whole country began to return to normality. Ten years of chaos had left numerous and deep physical and psychological wounds on the Chinese people and made them realize the importance of order. Laws and regulations were urgently needed in all fields, such as politics, finance and culture. It was not until the late 1970s that the restoration of the degree system really began. In 1978, Deng Xiaoping announced he would set up a degree system in an official report (Wu et al., 2001, p. 64). On March 22nd 1979, a special panel was formed to work on the draft, later named the *Regulations on Academic Degrees in the People's Republic of China*. Deng Xiaoping himself paid close attention to the drafting work and asked Jiang Nanxiang, the Minister of Education and chairman of the panel, to complete the work as soon as possible. The hard work of about 1 000 scientists and scholars resulted in a draft in December of that year (Wu et al., 2001, p. 64).*

The draft of the degree system, named *Regulations on Academic Degrees in the People's Republic of China*, was passed by the Thirteenth Session of the Standing Committee of the Fifth National People's Congress and promulgated on February 12th 1980 by Decree n° 4 of the Standing Committee of the National People's Congress. Since its implementation on January 1st 1981, it has undergone several modifications, which will be considered in detail later.

In *Regulations on Academic Degrees in the People's Republic of China*, the purposes and levels of degree were set out as follows: i) to promote the growth of mainland China's scientific and specialized taskforce; ii) to improve the academic standards of all disciplines in order to meet the needs of social modernization and construction; iii) to develop the country's level of education and science. Academic degrees in mainland China are divided into

* Readers might be confused that the restoration of China's degree system was closely connected with a statesman, Mr. Deng Xiaoping. An apparent question might be asked: How can academic affairs such as degree system be decided by a layperson such as Deng? In China, the characteristically strong centralized state power, the role of political leaders cannot be over-emphasized. The historical heroes were always important in China. In other word, the Chinese society is an autocratic society. Without the leaders, without their permission and support, an idea or popular will (no matter how smart or how strong), could never be realized. That is why Deng, who was farsighted and sagacious, was mentioned again and again. Without Deng, the degree system would have been delayed for years.

three categories – bachelor's degrees, masters, and doctorate. Specific degree requirements are set out by corresponding regulations.

Over two decades the system has proved to be a great success. Firstly, the number of graduates increased rapidly and their academic standard improved steadily. Before the setting up of the degree system, mainland China's higher education developed rather slowly. There were no concrete criteria or regular tests to select college students. Universities had once recruited *Gongnongbing* (worker, peasant and soldier) college students. Based on their political background but not academic competence, young people from worker and peasant families could enrol in colleges. Once there, they were constantly required to take part in political movements and were sent to factories and farms to do physical work. Professors in universities had once been deprived of the right to read and write, and, needless to say, the right to decide upon the requirements for graduation. Acquiring knowledge became unimportant and was paid less attention. Graduate standards focused on political attitude and family background but not academic level, leading to the deterioration level of education of the whole country. Meanwhile the number of college graduates was small and the level very poor. From 1949 to 1965, only 20 943 postgraduates were trained in the whole country (no degree was conferred). The *Regulations on Academic Degrees in the People's Republic of China* kept mainland China's higher education developing steadily and the requirements of each category guaranteed the quality of graduates. By 1999, 486 600 masters and 53 200 doctorates had been conferred, i.e. 26 times the total number from the 1950s to the 1970s (Wu et al., 2001, p. 476).

Secondly, the structure of the higher education system became more reasonable. For example, the ratio of graduates to postgraduates rapidly changed, as Table 1 shows:

Table 1. **Ratio of graduate and postgraduate**

	1966	1981	1991	1999
Ratio of graduates to postgraduates	149.1	56.1	51.1	12.1

Source: Wu, Zhenrou. Lu, Shuyun. Wang, Taifu (2001), *Graduate Education and Academic System in the People's Republic of China*, Beijing, Beijing University of Science and Technology Press, pp. 476.

Thirdly, the number of degree-granting institutes and conferred degrees increased. By August 1999, 665 higher education institutions had been authorized to grant bachelor's degrees. By June 2000, as Lü Fuyuan, former Vice-Minister of education reported, 729 units (457 institutions of higher learning and 272 scientific research institutions) had been authorized to grant masters degrees; 312 units (245 institutions of higher learning and 67 scientific research institutions) had been authorized to grant doctorate degrees.

5 009 095 bachelor's degrees, more than 534 000 masters and 65 000 doctorates had been awarded in the PRC by 1999. In 2001, graduate enrolment was up to 162 000 and there were more than 370 000 graduates on campus (Zhao, 2001; Lü, 2002).

Great progress has been made in mainland China's higher education, but most of these degrees were academic degrees, while only 8 000 baccalaureates and 27 000 masters professional degrees were awarded (see Table 2), which represents only a small proportion of the total number of degrees awarded. Details will be discussed later.

Table 2. **Development of professional degree in Mainland China**

	Authorization year	Degree-granting institutions	Enrolment (2001)	Enrolment (cumulative)	Number of degrees awarded ¹
MBA	1991	9-62	12 173	47 000	12 041 (2001)
ArchB	1992	22	3	3	8 000 (2000)
ArchM	1992	-13	3	3	300 (2000)
JM	1996	8-28	3	11 902	3 000 (2001)
EdM ²	1997	16-29	8 550	14 400	513 (2000)
EngM	1997	9-123	25 000	32 170	987 (2000)
AgrM	1999	24	1 611	3	3
MPVM	1999	9	320	3	3
DVM	1999	2	Unlimited	3	3
MPA	2000	24	3	3	3

1. The year they were awarded is in brackets.

2. <http://kaoyan.netbig.com/ky2/ky26/2514/20020125/113378.htm>

3. No official figures available.

Source: Summary Reports. *Academic Degrees and Graduate Education*, 2002.1.

The second change: the introduction of professional degrees in mainland China

After the setting up of mainland China's degree system, for a long time only academic competence was emphasized. In mainland China, traditional culture respects *shi* (intellectuals) but looks down upon skilled workers. At the beginning of mainland China's reform, because of *Wenhua Dageming* mentioned above, university teachers and researchers were urgently required, so only academic degrees were considered important. Theoretical rather than practical aspects were over-emphasized in teaching and research. As a result, degree candidates, regardless of specialty and category, were all theory oriented. An extreme example is medical doctors who were only skilled at writing articles but not at making diagnosis (Wu *et al.*, 2001, p. 212). In the early 1990s, the CCPC decided to implement a socialist market economy. From then

on, market forces gained strength. The labour market needed not only theorists but also practitioners. The response of the degree system was slow and ineffective, hence academic degree holders were relatively abundant whereas practical skills were urgently needed. The fact was that some graduates could not find jobs even though the total number of higher education graduates was small. In the labour market, professionals of all fields were scarce despite the fact that the salary of advanced mechanics was higher than that of masters graduates.

Economic development required a change in degree system, especially the training models for degree candidates. As part of a planned economy, mainland China's had based its higher education system on that of the former USSR, including the degree candidates training models. To change this, from 1991, China's Minister of Education began to authorize professional degree programs. The professional degrees training models were different from that of academic degrees. On the one hand, professional degree candidates were required to be acquainted with the basic theories, concepts and methods of certain subjects. On the other hand, practical ability deserved more attention. Students' practical experience was considered an important factor for enrolment. Professional degree candidates were trained to do practical work and the courses emphasized the collaboration between industry and universities. Candidates and employers warmly welcomed professional degrees when they first appeared. For example, among mainland China's 5.41 million public servants in 2001, only 52% had secondary school (?) education, 10% had university education, and only 1% had postgraduate education, with very few majoring in administrative affairs (Tang, 2001). To cater for the needs of government and public welfare departments and to train high quality public servants, the Academic Degree Evaluation Commission under the State Council approved the introduction of MPA education in 1999. Its first appearance attracted many candidates: 11 836 public servants took a crucial test in the first entrance examination in October 2001 and the enrolment was 2850 (Wang, 2002). It has been estimated that in 2006 the enrolment in MBA courses might exceed 30 000 and the candidates on campus would exceed 80 000 (Tong, 2002). The scale of JM education will increase from 4 600 in 2001 to 20 000 in 2005 and to 50 000 in 2010. The number of institutes has already increased from 28 to 35; by 2005 there should be 50. The growth of law education is to focus on the JM degree, which plans to replace the education of law in colleges by the year 2010 (Huo, 2002).

Both the number of professional degree categories and number of degrees conferred have increased rapidly. By 2002, the Academic Degree Commission of the State Council had authorized many universities to set up professional degree programs. There were eleven types of degree: Master of Business Administration (MBA), Architecture Professional degree (Bachelor's degree and

Masters), Master of Jurisprudence (JM), Master of Education (EdM), Master of Engineering (EngM), Master of Medicine (MM) and Doctor of Medicine (MD.), Master of Public Hygiene (PHM), Master of Stomatology (SM) and Doctor of Stomatology (SD), Master of Public Administration (MPA), Master of Agriculture Extension (AEM), Master of Veterinary Medicine (MVM) and Doctor of Veterinary Medicine (DVM). The number of students in school increased from less than 100 to more than 100 000. The number of institutions, which could train professional talents, had increased from 9 to 235. Relevant data is highlighted in Table 2.

Table 2 reveals that in 1991 only MBA candidates could be trained but in 1999 the number of categories increased by three. The number of institutions that trained EngM candidates increased from 9 to 123 in five years. It seemed that the speed of innovation was accelerating.

The speed of development revealed the desperate need for professionals in business management, jurisprudence and public administration, sectors in which working conditions were good and salary expectations high. Market forces permeated the orientation of teaching, research and cultivation of talents. The influence was persistent and comprehensive. The entry of mainland China in the WTO intensified the need for such professionals.

Professional degrees: existing problems

So far, our focus has been on the rapid development and changes of mainland China's degree system. However, there are many problems.

Firstly, the degree category structure is imbalanced. The imbalance was most apparent in EdM. Table 2 shows the slow development of EdM compared with other professional degrees. The enrolment of EdM in the year 2001 accounted for 34% of EngMs, 70% of Mass, less than 22% of the total enrolment. The number of EdM cultivation institutes was one fourth of EngMs and half of MBAs. The number of institutions that trained EdM candidates had only increased by 13 (from 16 to 29) in five years, which is a rather slow increase compared with the number of EngM. Furthermore, the total number of institutions, training EdM, AgrM, MPVM, and DVM candidates, was rather small in comparison with those of MBA, EngM institutions. The enrolment number of EdM, AgrM, and MPVM was far less than the number of MBA and EngM. By the year 2000, professional degrees of EdM and JM were a small part of the total number.

Looking at the development of professional degree in the United States will be helpful for understanding this imbalance. In 1940, 27 000 master degrees were granted in the United States; among them 15 000 were professional degrees, EdM accounted for two thirds of all the professional degrees (Conrad *et al.*, 1993). After World War II, the development speed of

graduate education was accelerated, and professional education developed very fast, among which the proportion of EdM and MBA was 42% and 9% respectively.

The imbalanced development of professional degrees will cause serious problems in the future. Firstly, degrees such as MBA, JM and MPA will inevitably take a big share of the resources allocated to education. Secondly, competent candidates will take up business, law or administration rather than education as a profession. Lastly, in the future, because of the scarcity of resources and candidates, it will be impossible to train high quality professionals. To avoid the creation of a vicious circle, the government should take measures to maintain the balance of the development of professional degree categories. More attention and funds should be allocated to teacher training.

Secondly, the degree rank structure was imbalanced. There continued to be a disproportion between the supply and demand of degree holders despite the rapid development. At present, due to the disproportionate development, professionals in many occupations are urgently needed. The internal structure of the professional degree manifests unilateral development. For example, an overwhelming proportion of the recruitment of professional degree focused on the master degree, but not on doctorates or bachelor's degrees. This has led to the unilateral development of professional degrees and will cause problems sooner or later as certain degrees will lose their attraction.

Thirdly, the status and importance of professional degrees in higher education was not clear and definite. The fact that the candidates of PHM., AEM. and MVM. were not as popular as other categories was partly due to people's lack of familiarity and partly due to the influence of China's traditional culture. In China, people look down on physical labor and thus look down on physical labor related professions. Nevertheless the implementation of these degrees indicated that Chinese governmental policy had emphasized the importance of agriculture, forestry and people's living quality in Mainland China. More and more attention will be paid to sustainable development factors in the future. For example, the Ministry of Education and the Academic Degree Commission of the State Council held the first conference of the whole country's professional degree education in November 2001. It was an effort to make professional degrees public and known. Meanwhile, problems related to development and reform was discussed at the conference.

Fourthly, there were insufficient qualified teachers and appropriate textbooks and the needs for development either in degree level or in student numbers could not be met. Current educational policy and teaching methods need fundamental reform and teachers must bear the brunt of the reform,

experts argue. Innovation in teaching methods is urgently required at present and case database for teaching needed to accumulate as soon as possible.

Fifthly, the ties between professional degree and professional qualifications is not close enough. The professional qualification system in mainland China at the current time is far from perfect. Appropriate degrees are not a prerequisite qualification for certain professions. It is obvious that more and more vacancies will require certain degrees or diploma holders in the foreseeable future.

Last but not the least, the measures to guarantee the quality of professional degree education were not good enough. Scientific method and technology should be explored.

Fortunately these problems have been identified and discussed by specialists and government officials. Concern has increased greatly and as a result some corrective measures have been taken. The more an issue is known and reviewed, the sooner it will be resolved.

Notwithstanding many problems, we have reasons to believe that the development of professional degrees in mainland China will be irreversible and will continue to accelerate. Measures such as expansion in higher education and a priority policy for science and technology have been taken to maintain the prosperity and vitality of mainland China's economy, to achieve the transfer from a planned economy to a market economy and from an agricultural-industrial society to a knowledge-based society, to change the handicap of large population into a superiority in human resources. Professional degree programs have provided preparation and training at an advanced level for specific professions and will continue to be widely welcomed for their practicability.

Behind the changes: economic reform and diversity of occupations in mainland China

The changes of mainland China's degree system were an indispensable part of its socio-economic change. There were at least two socio-economic factors that led to such change: economic reform and diversity of occupation.

Firstly, the synchronization of economic reform and the innovation of the degree system revealed that the superstructure was determined by an economic basis, namely, the system depended on the economy. Mainland China's economic reform was a unique process. In the early 1980s, the government agreed to the coexistence of a centrally planned production and market pricing. In 1991, the Central Committee of the Communist Party called for the elimination of the dual-track system and boldly recommended a gradual shift to a market system. One year later, the National People's Congress declared that the objective of reform was a "socialist market

economy with all stress on the free market” (Naughton, 1995, p. 288). The government then unambiguously embraced the free market economy and began systematically dismantling the outdated command plan for economic structure.

However, the economic reform was not strategically planned but advanced step by step. In Deng Xiaoping’s words, *mozheshitouguohe* (cross the river with the feet feeling the stones on the riverbed). Therefore the reform was adaptable and flexible. Yet, “a limited number of crucial government decisions and commitments were required in order to allow reform to develop. In certain periods, policymakers acted as if they had a commitment to a specific reform strategy” (Naughton, 1995, p. 7). In the process of the reform as a whole, “what is most striking is the succession of incremental, steadily accumulating measures of economic reform that have gradually transformed the economy in a fundamental way” (Naughton, 1995, p. 20).

The innovation of the degree system had some similarities with the economic reform not only in terms of procedure but also in methods. Adapting to the change of governmental focus and economic system, the context for degree development extended from academic degrees to professional degrees. The aim of the innovation was to meet the needs of social changes, so changes happened when necessary.

Secondly, since the initiation of the reform and the opening up in 1978, great changes have taken place in mainland China’s social structure. The original parallel social structure characterized by two classes and one stratum – the working class and the peasantry as well as the intellectuals – has considerably changed. Nowadays the classification of social strata is based on profession, instead of political status, place of residence and administrative affiliation. A three-year research project conducted by nearly 100 sociologists showed that mainland China’s society was classified into ten major strata, according to *Research Report on Social Strata in Contemporary Mainland China*, published by Chinese Academy of Social Science (CASS). They were state and social administrators, management personnel, private business owners, professional and technical personnel, office staff; self-employed business people, commercial and service staff, industrial workers, agricultural workers, unemployed and part-time urban employees (Lu, 2002). The diversification of social strata illustrated the fact that many new occupations emerged while many old occupations disappeared. The new occupations required skilled workers and more and more sophisticated professional qualifications. This has been a worldwide phenomenon observed in countries such as the United States and emerging countries in recent decades.

In mainland China, the degree system has experienced two transitions: initial growth and the introduction of professional degree categories. Our study has shown that the changes were more passive than active and points of similarity can be found between mainland China's degree system and systems in other sectors. Its passive response has determined its limitations during its development, as outlined above. This passivity might be positive in the earlier stages of the reform, but can it be helpful as reform deepens? The existing problems of professional degrees might tell us something. Responding passively is not enough. Active strategies are needed. Structural imbalance needs to be adjusted by a government with foresight rather than for short term market reasons.

Conclusion

The development and innovation of mainland China's degree system demonstrated that, sooner or later, economical development would lead to adjustment of the system, be it educational or political. The existing problems of professional degrees illustrate that the construction of the system in mainland China fell far behind its economic development, which will certainly become a constraint in the long run. Reform of the system is urgently needed to guarantee the sustainable development of the social economy, including not only the degree system but also the whole higher education system. In other words, a certain type of economy needs a certain type of system, regardless of ideology.

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