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# 'Academic Capitalism': Universities' Consultancy Agendas

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# 'Academic Capitalism': Universities' consultancy agendas

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## ABSTRACT

Recent debate in Higher Education (HE) has attempted to identify the legitimate components at the core of academic scholarship. Teaching and research, are recognized activities of modern academia; although their nexus is at times questioned. This paper seeks to understand the role of a rising academic activity, academic consultancy, and to portray its impact onto HE. A two-stage research design including a web-based survey and semi-structured interviews was implemented to gather the experiences and perceptions of academics in information technology/information systems/information management (IT/IS/IM) in the United Kingdom (UK). The findings reveal that the majority of consultancy activities undertaken by the study participants are of small scale, of technical nature and in areas strongly related to the research interest of the academics in questions. Although a shared understanding of what consultancy is can be found among academics, the perception of how consultancy impacts teaching practices and research differs significantly within research-led or teaching-led universities. Such findings are significant as they portray entrepreneurship as a contributing factor that may help universities to shape their policy, culture and structure.

## Keywords

Academic Capitalism, Consultancy in IT/IS, Higher Education, Entrepreneurial university, Academic Practice in IT/IS.

## INTRODUCTION

There is a continuing debate relative to consultancy activities undertaken by academics within universities. The issue relates to the potential enhancement of teaching in this respect and raises questions as to what constitutes the 'academy' and its function (Deem and Lucas, 2006). The question requires a logical extrapolation of what is meant by being an academic and what constitutes consultancy activity? This paper explores the perceptions and experiences of academics with regard to their engagement with consultancy, and what has been termed 'academic capitalism' (Slaughter and Leslie, 1997; Slaughter and Rhodes, 2004). This has also been expressed in terms of the 'entrepreneurial university' (Slaughter and Leslie, 1997; Brennan, Wall and McGowan, 2005). In particular, this paper seeks to make sense of how the activity of academic consultancy/capitalism informs other areas of academic practice. It explores what this means for reward and policing systems, and other management mechanisms, and what this may imply in terms of being a contemporary academic.

University consultancy activities may be related to seven levels of analysis: international, national, regional, institutional, faculty, departmental and individual academic. These may be seen as nesting together, from the macro level of international/national, to the micro level of the individual academic. A further category, *discipline*, may potentially cut across a number of levels. Most studies are characterised as focusing predominantly on the (inter)national, regional or institutional level. For example, the primary focus of Slaughter and Leslie was on global economic changes, national policy and financial patterns at the international level across four countries (Australia, Canada, the United Kingdom (UK) and the United States (US)) (Slaughter and Leslie, 1997). At a national level Etzkowitz (2003) examines the "triple helix" of

university-industry-government interactions. Also at the national level, Lazzeroni and Piccaluga (2003) explored the evolution of a more entrepreneurial model of university in Italy. Mok (2001) examines academic capitalism in Hong Kong, a Special Administrative Region (SAR) within the People's Republic of China. For Bernasconi (2005) the principal unit of analysis is a particular institution – the P. Universidad Católica de Chile. Finlay (2004) however looked at the Faculty of Education within his own institution. Finally, Brennan et al. (2005) drew on experiences in their own institution in Northern Ireland, to study individual academics from a range of disciplines, and identified four types of academic entrepreneur: hero, maverick, broker and prospector.

Noting Brennan et al. (2005) this paper examines the attitudes of individual academics. However, unlike Brennan et al.'s "range of disciplines" (Brennan et al., 2005, p314) it reports on academics from within a particular discipline, namely that of information systems/information management (IS/IM) from a number of institutions. The paper is informed by empirical evidence derived from a survey of academics in the (IS/IM) discipline area in the United Kingdom (UK). Both quantitative and qualitative data were obtained from a web-based questionnaire issued to all members of the United Kingdom Academy of Information Systems<sup>1</sup> (UKAIS) and 12 semi-structured interviews with staff from both a teaching-led University and a research-led university in Scotland<sup>2</sup>. The results presented here are part of a much wider study exploring the nexus between teaching, research, scholarship and consultancy in IS/IM.

### THE ROLE OF AN ACADEMIC IN THE ACADEMY IN CONTEMPORARY HIGHER EDUCATION

Historically, the academy was perceived as the means of providing teaching. Indeed, Newman (1852) stresses the university was originally a place for training teachers. In this orthodox view, the purpose of the academy may be seen as being primarily concerned with the application of knowledge, culture and values through teaching, training and experience. The inclusion of research as a function of the university is a relatively new concept (Schils, 1992). It was established in the UK only after 1945 when the then UK government attempted to follow the Germanic model of higher education, which integrated teaching and research into one organisation (albeit within a science and engineering base).

There are a number of views of the nature and scope of the academy. For example, a vocational model of the university is concerned with training a skilled labour force, which requires applied research [Mode Two Knowledge], rather than 'pure' academic research [Mode One Knowledge] (Gibbons, 1997). Gibbons (1997), suggests a clear strategic intent of 'new universities' towards Mode Two Knowledge. Mode Two Knowledge is created by communication, interaction and negotiation both within and outside the academy, where the benefactors of such knowledge are industry, commerce and students rather than fellow academics as prescribed in traditional Mode One Knowledge. As such, Mode Two Knowledge is defined by its creation, the nature of its use and those who use it. The Mode Two view would suggest the area of consultancy is important and that such activities inform teaching.

In addition to Mode Two, the change from an elite higher education system to a mass higher education system (McInnis, 2000) now influences what the sector is. In particular, how academics balance the competing demands of their professional activities through creating distinct niches and attempts to brand the University 'product'.

In this situation, new modes of learning, delivery, and assessment are required to meet the needs of students, faculty, institutions and employers. The current UK government agendas relates to lifelong and independent learning, employability skills and research capacity. Inevitably this combination of influences is having a profound consequence on what academics have traditionally regarded as their two core activities - teaching and research (Coaldrake and Stedman, 1999; Zubrick, Reid and Rossiter, 2001). It has been suggested that over the past decade, there has been a gradual, often structural, separation between research and teaching (McNay, 1999). This incongruence may be creating an agenda, through a variety of permutations which develop an academic's primary function, i.e. academics may teach, research, some undertake both activities and/or engage in consultancy.

The ascendancy of research, rather than advanced scholarship (Lucas, 2006) over the last 100 years, has had the effect of making teaching, especially undergraduate teaching, a less central activity for many academics (McNay, 1999). This has given rise to what has been called the 'non-teacher' (Kerr, 1963 [1995]), i.e., an academic who only performs research or consultancy. There, nevertheless, exists a general agreement in universities that both teaching and research are important functions and legitimate components of the academic role. However, it is argued that there is a significance impact upon these traditional roles of consultancy in academia.

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<sup>1</sup> Fully paid up members 2004/05, which numbered 308.

<sup>2</sup> During 2005/2006

## THE SIGNIFICANCE OF ACADEMIC CONSULTANCY

There is a clear trend in higher education in the UK, in which university senior managers are looking to reduce their institutions dependency on government funding. This usually an attempt to enter into collaborations with industry and commerce for financial reward or what could be called, as noted, 'academic capitalism' (Slaughter and Leslie, 1997; Brannan et al., 2005). This consultancy entrepreneurship is an element, which may be used to inform teaching or research practice.

Consultancy may be defined as the application of existing knowledge to an agency, where the problem situation is usually client-specific. For example, relating to day-to-day problems, longer-term strategic issues and so on; or giving advice. However, the distinction in practice between consultancy and contracted academic research is blurred. The general view is that, in consultancy, the academic provides advice to businesses rather than actually conducting the research (Lambert, 2003).

The idea of academic staff undertaking consultancy is widespread in a number of academic disciplines in the UK, such as Law, Risk, Finance, Marketing or Mathematics. According to the Lambert Review (Lambert, 2003), which considered the link between the academy and business, the total income for universities in the UK from consultancy was estimated at around £100 million<sup>3</sup> in 2000-2001. However, the Lambert Review suggests that the real figure is much higher, as much of the consultancy work undertaken is on a 'private basis' between academics and companies and, thus, can go unrecorded. Indeed, the current market for management consultancy (with includes IS/IM) is now estimated to be valued at just over £10 billion, in 2003/2004<sup>4</sup>. According to Lambert (2003), most of the consultancy work is undertaken by research-intensive universities, who contract with 175 firms on average compared to 110 for less research-intensive universities (Lambert, 2003). However, in a survey undertaken by the Times Higher Education Supplement (THES) of 70 UK universities on consultancy income, it found that although universities such as Imperial and Cranfield were the largest 'earners' of consultancy income, the ex-polytechnics such as DeMontfort, Coventry and the Robert Gordon University, now featured in the top seven income generation earners (Shepherd, 2006).

There are a number of reasons why academics engage in consultancy activities. Since the HE environment is changing, it provides a creative outlet for their talents and expressions (RCD, 2006). Many see the role as value adding of 'doing consultancy' in keeping their skills marketable in the new MacDonalidization<sup>5</sup> of Higher Education (HE) (Larwood and Gattiker, 1999). Many argue that undertaking consultancy allows the academic to earn extra income and gives them a sense of professionalism as practitioners in their field. Indeed, many academics who undertake regular consultancy see it as a benefit to them, the client and to their students. In this respect the consultancy acts as a form of 'real life' applied research and is particularly suited to the Business School arena. Given lead times for many academic journals, this form of research may be a realistic way of gaining peer credibility.

Consultancy may be seen as a professional odyssey, which links academics' teaching to real contextual experiences. Evidence can be portrayed to students to make sense of key ideas and concepts. Such 'real life' case evidence may be published, thus allowing academics to be recognised as experts in their field on a national and international basis. Furthermore, consultancy supports trans-disciplinary research in the form of action centred research (Burack et al., 1996). For applied and rapidly changing disciplines such as IS/IM, feeding back information from consultancy activities may be critical to ensuring that what is being taught to students is what is being done and required by industry and commerce.

However, the whole area of academic consultancy tends to be linked with the funding of universities, via mechanisms such as contract research and collaborative research, as expressed in the Lambert Review (Lambert, 2003), rather than how the experiences of undertaking consultancy enhances students learning and teaching or in 'being an academic'.

Although, the word consultancy does not explicitly exist in many educational policy documents, such as the Dearing and Garrick Reports (NCIHE, 2007a, 2007b), there is an implied presence. This is more to do with a 'warning shot' to encourage the HE sector in the UK to demonstrate value for money, and a concern in government policy thinking regarding the competitiveness of the UK in the World, which needs to be strategically managed (Porter and Ketels, 2003). Research on the competitiveness of UK Plc, suggested that insufficient knowledge transfer was happening between the academy and industry. An increase in knowledge transfer that is deemed to be of relevance to the needs of industry would help universities to receive external/overseas income. Current policies in the UK will deploy over £14 billion worth of research undertaken in

<sup>3</sup> Higher Education Business Interaction Survey 2000-01, HEFCE, 2003 (quoted by the Lambert Review; Lambert, 2003).

<sup>4</sup> Statistic taken from the Institute of Management Consultancy, newsletter, March 2005.

<sup>5</sup> Defined as the standardisation, rationalisation, enforced quality regimes and the same educational experience no matter where a student studies. Based on the work of Ritzer (1996) – The MacDonalidization of Society.

2005/2006, with only £4.5 billion being allocated by the UK Research Councils<sup>6</sup>. Of this, only £100 million will be provided by the Scottish Funding Council, with the strong strategic steer that initiatives like the Industrial Partnership Development Fund (IPDF) and Employer Partnerships and Knowledge Transfer Partnerships (formally Teaching Company Schemes) within Scottish HE are important.

Interestingly, in the National Report For Business Education Support Team on the analysis of the QAAHE Business and Management Subject Review Reports (2001), by Ottewill and MacFarlane (2005) (where IS/IM sits in the Learning and Teaching Support (LTSN) network), the 'best practice' factors that contributed to high teaching quality and enhancement ratings found no mention of consultancy featuring in learning and teaching strategies. This lack of explicit usage only compounds how academics might perceive the role, purpose and function of consultancy and knowledge transfer in the academy and in their professional practices.

The idea of knowledge transfer (assuming the process of research can yield a product that can be applied) is to strengthen links between higher education, society, government, the economy and students, and so consultancy will play a greater part in the function of being an academic. This is reflected in SHEFC's broad definition of knowledge transfer:

"The dissemination and exploitation of the outputs of higher education - research, knowledge, skills, expertise or ideas to achieve economic, educational, social, healthcare and cultural benefits for society'. This desire can take many shapes the most notable are; company spin outs, contract research, consultancy, Knowledge Transfer Partnerships, Continuing Professional Development and staff and student placements" (SHEFC, 2004).

Indeed the Lambert Review (Lambert, 2003) stressed that:

"the main challenge for the UK is not about how to increase the supply of commercial ideas from the universities into business. Instead, the question is how to raise the overall level of demand by business for research from all sources" (Lambert, 2003, p 4).

The discussion above regarding the significance of academic consultancy has largely been in general terms. There are particular pressures on academics involved within the IS/IM discipline which may lead them to engage in consultancy activities.

The nature, role and value, of IS/IM as an academic discipline has been the source of debate. In comparison to many other academic disciplines (eg Mathematics, Medicine and History) IS/IM is a relatively new field of inquiry, and in practice there are a number of conflicting schools. For example, there are those who emphasise the technological (IT) component of an information system. A second group regards an information system as a social system, which uses technology. A third group stresses the systemic nature of an information system and derives both analysis and design methods on systems theory. Hirschheim and Klein (2003) claim that such fragmentation lies at the root of IS/IM's potential 'crisis', and the identity of information systems as a discipline may be diluted by a move away from a central focus on investigating phenomena intimately associated with IT based-systems (Benbasat and Zmud, 2003). On the other hand Galliers (2003) contends that IS/IM is trans-disciplinary and works at the intersection of several disciplines including computer science, management and behavioural science. Galliers calls for pluralism and the pursuit of new approaches in a field which is essentially multi-levelled and multi-faceted.

Tensions regarding the nature of the discipline, and whether it is a separate discipline in its own right, may also be seen in the existence (or otherwise) within academic institutions of distinct IS/IM departments or groups particularly within business schools (Davis, Massey and Bjorn-Anderson, 2005). This, in turn, may partly reflect a trend in falling student enrolment in dedicated IS/IM degrees<sup>7</sup>, and in debates around to what extent IS/IM should be incorporated as a distinguishable element of other courses (for example within business schools) (see for example Davis et al., 2005; Dhar and Sundararajan, 2006).

A further, more general, challenge to the IS/IM discipline has come from the work of Carr which has been influential in challenging the importance of IT (and perhaps by implication IS and IM). Carr's work has stimulated much debate (see for example Bannister and Remenyi, 2005; Dhar and Sundararajan, 2006). A report on a British Computer Society (BCS) Thought Leadership Debate describes the significance of Carr's work as follows:

<sup>6</sup> Statistical information taken from the Higher Education & Research Opportunities (HERO) Web Site – [http://www.hero.ac.uk/uk/research/research\\_page170.cfm](http://www.hero.ac.uk/uk/research/research_page170.cfm) [Last accessed 31st March 2005].

<sup>7</sup> Alternatively, could it be that a lack of 'visibility' of IS/IM within faculty structures may contribute to falling student numbers as the discipline lacks a natural 'home'/location for potential students to 'latch on to'?

“[T]he importance of Carr is that CEOs and CFOs are reading about this book and taking it seriously. Ever since IT first appeared, there have been critics who doubted its value. Now they think they have a heavyweight intellectual champion in the pages of the HBR [Harvard Business Review]” (British Computer Society, 2007, p 1).

Taken together, the above discussion paints a challenging picture for IS/IM academics. To what extent might engagement in activities relating to academic capitalism, and consultancy in particular, be a possible response to these challenges? Firstly, as already noted, the applied and rapidly changing nature of IS/IM may provide a source of consultancy opportunities, indeed the plurality of the IS/IM discipline across the three areas outlined above offers a rich vein of potential consultancy activity.

Secondly, with the value added by IS/IM under scrutiny within academic institutions, then adopting the Mode Two agenda and generating 3<sup>rd</sup> Stream income may compensate for reduced income from teaching IS/IM. Thirdly, going out and solving business problems via consultancy activities may allow IS/IM academics to present themselves as “very business savvy and not [be] perceived as ‘geeky’ by students” (George, Valachich and Valor, 2004, p 1044). This may help address questions within institutions (from colleagues and students) of the practical real world relevance of IS/IM tools, techniques and skills. Reflection on consultancy activities may be a key in informing the IS/IM curriculum to ensure that what is being taught to students is what is being done by, and also required by, industry and commerce.

Finally, IS/IM academics might possibly fulfil a role in serving the training needs of the consultancy industry (Adams and Zanzi, 2004). Though their discussion focused specifically on management consultancy, Adams and Zanzi’s (2004) suggestions of ways academia could support the consulting industry may also apply to IS/IM, and indicate activities which might form additional income streams. For example, inter alia, academia in IS/IM could provide training which focuses on developing consultants’ critical thinking (and not just a single prescribed ‘approach’) (Adams and Zanzi, 2004). Where IS/IM academics are carrying out consultancy thus gaining an ‘insiders’ perspective’, Adams and Zanzi provide further support for consultancy-teaching links by their suggestion that

“academia can and should educate potential clients or consumers of consultancy so they are better prepared to work with, and when necessary manage consultants they contract for projects” (Adams and Zanzi, 2004, p 572).

The preceding discussion regarding consultancy along with other closely allied areas of university activity, i.e., contracted research and collaborative research, indicates that these areas are important to the academy, including IS/IM academics. It is, therefore, useful to explore the perceptions and experiences of IS/IM academics with regard to the role, value and nature of ‘academic capitalism’ in this respect.

## RESEARCH DESIGN

The research design comprised of two phases, a Web based survey followed by semi-structured interviews. Web based surveys are relatively new and offer their own particular advantages and disadvantages. They are a derivative of traditional surveys. Surveys have a particular advantage when exploring consultancy activity, since they can accommodate the researcher’s desire to understand and investigate what happens in the social world. A pilot study was undertaken, which was then followed by an extensive web-based survey to a sample size of 308<sup>8</sup> information systems/information management (IS/IM) academics in the UK, with a 30% response rate. The sample strategy for this phase was probability sampling using a closed population, i.e., only members of the UKAIS (United Kingdom Academy of Information Systems). The UKAIS is

“an effective combination of a ‘learned society’, ‘communications channel’ and ‘pressure group’ ... [and] is a conduit for communication between industry and academia to ensure that relevant courses can be designed and research initiatives established” (UKAIS, no date a).

It aims to “promote a better knowledge and understanding of information systems within the United Kingdom ... [and] improve the practice of information systems teaching and research” (UKAIS, no date b).

In relation to the web-based survey (Phase 1), advantages of web-based surveys cited in the literature include: low cost, quick turnaround time, collapsed geographical boundaries, user-convenience, and more candid and extensive response quality (Smith, 1997). Navigation and flow are important in any questionnaire, but they are particularly important in Web-based surveys (Redline and Dillman, 1999). Web surveys are a visual stimulus, and respondents have control over how and even whether they read and comprehend each question (Dillman, Phelps, Tortora, Swift, Kohrell and Berck, 2001). Participants in Web surveys are less likely to take extreme positions in their responses than people that take part in a telephone survey (Satmetrix, 2001). Web surveys provide opportunities for variety in question structure, layout, and design, which are not available in paper surveys (Couper, 2000, 2001; Zanutto, 2001).

<sup>8</sup> Number of fully paid up members of the UKAIS in 2004/2005.

Some participants in the Web-based surveys might have been concerned with privacy issues. Bosnjak and Tuten (2001) state that metadata can be collected about participants, without their knowledge, through cgi scripts, Java applets, and user log files. Given this ethical issue, files were deleted from the web-based server everyday and were encrypted during the day, to prevent access by the researcher, thus ensuring anonymity of the respondent. However, this design feature did necessitate providing reminder emails to the whole sample, even if they had already completed the web-based questionnaire.

There are also a myriad of technical issues that need to be considered before implementing a web survey as discussed in Dillman et al. (1999), and Smith (1997). The lack of standardisation among operating systems, servers, and browsers causes a number of problems and requires time-consuming efforts to ensure the compatibility and the practicality of a web survey; this was achieved as no reported browser incompatibility problems were reported.

Having obtained a 'snap shot' of what a sub-set of the IS/IM community experienced and perceived with regards to consultancy, these findings directly supported the question construction of the second phase of twelve semi-structured interviews within two Scottish Universities, one a teaching-led university and the other a research-led<sup>9</sup> university. Two different institutions were selected to give a strong comparison between organisational contexts, staff expectations and practices in consultancy. Six interviews with IS/IM academic staff occurred in each university. In total, nineteen staff were invited, and twelve agreed to participate, with four refusing to be audio taped.

The two Scottish universities were identified by aggregating data from the RAE 2001, and Teaching Quality Assessment (TQA) to determine one university with a strong and externally assessed research and teaching rating and one with a developing research rating, which had a strong, and/or developing teaching rating. Both had to be engaged in the domain of IS/IM in the form of an academic department/divisions who had an established IS/IM taught postgraduate programme.

### Interview Sample

The sample from the teaching-led university was as follows;

- one programme leader from an IS/IM focused taught MSc, who was research active and a seasoned senior lecturer, with a teaching role;
- one academic director of IS who is research active and a seasoned senior lecturer, who had a minor teaching role;
- one director of IS consultancy, a newly appointed senior lecturer, not research active, with several years lecturing experience;
- one seasoned senior lecturer, no longer research active but had a teaching role;
- two seasoned lecturers, both research active and who had a teaching role.

And from the research-led university;

- one programme leader for an IS focused taught MSc, who is research active and a seasoned senior lecturer, with a teaching role;
- two seasoned lecturers, who were both research active, who had teaching roles.
- one seasoned lecturer, who is research active;
- one new lecturer (with recently completed PhD in the area), with a teaching role;
- one senior manager who is a Professor in IS/IM, who was research active and had 'guest' teaching roles within the University.

Each interview lasted a maximum of 45 minutes. Each participant was invited to attend by an e-mail and asked to give informed consent for the session to be audio taped to allow a partial transcript to be developed and subsequently analysed. The questions were asked in the predefined order as developed, but not in strict sequence, thus allowing areas to be pursued as the interview developed.

Where permission was given to be audio taped (eight out of the twelve interviews), transcripts were analysed using the canons of good practice advocated for by Haig, (Haig, 2004) when employing grounded theory as a data analysis tool. Grounded theory has at its heart interlocking constructs, to develop theory inductively from data; which can be elaborated theoretically and judged to be fit for purpose within given constraints (Glaser and Strauss, 1967). This is because, data

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<sup>9</sup> Doctoral/Research Universities - Extensive: These institutions typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. They award 50 or more doctoral degrees per year across at least 15 disciplines. The Carnegie Classification includes all colleges and universities in the United States. In the UK the Department for Education and Skills, define as the same, but for 60 doctorates awarded per year.

collection, analysis and the resultant theory generation has a reciprocal relationship, in that the researcher, rather than commencing with a theory that has to be verified, commences with an area of study and allows relevant theoretical conceptual constructs to emerge from the process (Strauss and Corbin, 1990).

## FINDINGS

This section presents the findings of the survey and interviews based around the three themes of: what is consultancy, what is the extent of consultancy engagement, and what are the perceptions of the value of consultancy.

### Definition of Consultancy

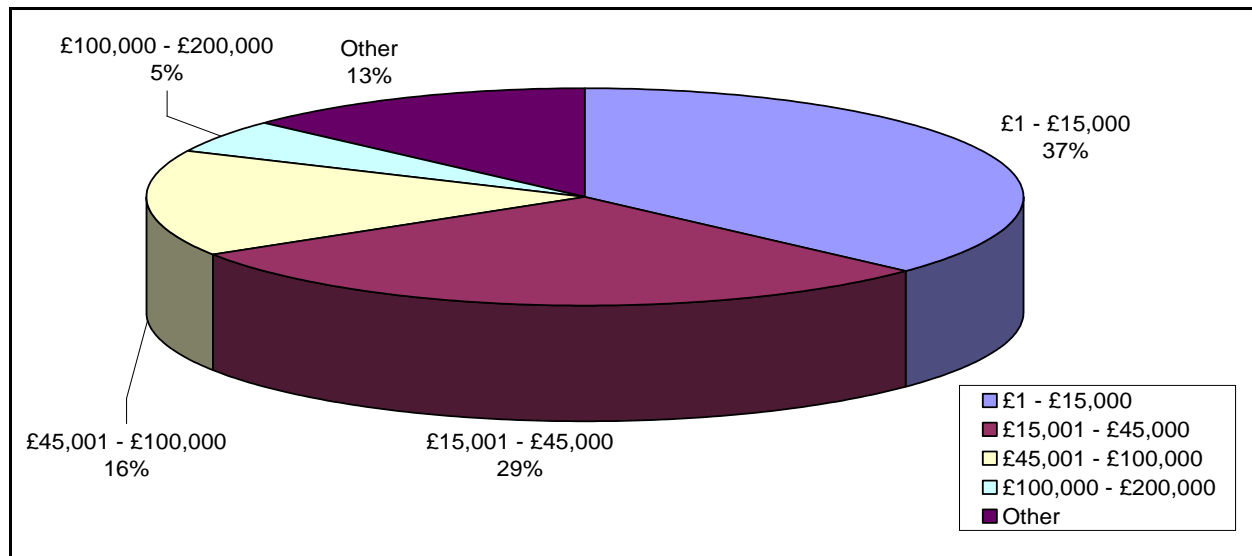
For the purposes of the Web-based questionnaire, consultancy was defined as

“an academic applying existing knowledge to an agency, where the problem situation is usually client specified, in order to solve or diagnose a problem[s] e.g.: day-to-day problems, longer term strategic issues, etc”.

Analysis revealed that the majority of (85%) respondents were satisfied with the definition given. Fourteen respondents commented further, with eleven of these respondents feeling that consultancy was about academics bringing theoretical knowledge to organisations to help identify problems, making sense of them and solving them. Three respondents questioned the terminology, drawing specifically on the term ‘agency’, commenting that different organisations would require different theoretical knowledge and skills to be used, e.g., public versus private organisations.

### Extent of Consultancy Engagement

In order to establish the level of consultancy engagement, consultancy gross income (i.e., revenue) was used to illustrate the level (in terms of monetary gain over the last three years) of the individual academic's involvement in consultancy. See Figure 1.



**Figure 1: Frequency of Respondent's Gross Consultancy Income (n=38)**

The results suggested that, of the 85% respondents who answered this question, 44.7% (38 respondents) claimed to have engaged in consultancy. This degree of participation is far lower than that reported for the other components of this study, namely teaching, research and scholarship. Interestingly, when a twelve-month period was selected in order to accommodate varying academic workloads throughout the academic year, the results suggested that, on average, the respondents spent around 5% of their 'total academic time' engaged on and with consultancy activities. This would suggest that academics appear to be interested in pursuing consultancy, but that the actual level of engagement is limited. Why the respondents felt the need to pursue consultancy activities is not clear from the data. However, it may be to 'earn' additional monies to compensate for the lower academic salaries they may receive compared to colleagues working in professional practices. Alternatively, they may feel the need to keep a 'foot' in the camp, by way of being able to 'practice what they preach' and, possibly, to keep the link to being an IS/IM professional, rather than being solely an IS/IM academic.



Nevertheless, it is important to acknowledge the possibility that a 'shadow / grey academic consultancy economy' may exist, i.e., staff participating in consultancy activity, but not declaring it to their university. This, indeed, may skew the results, as a true picture may not have been presented.

In January 2006 the Times Higher Education Supplement suggested in a review article that although not all universities have a staff consultancy register, university managers do encourage staff to engage with consultancy (Shepherd, 2006). Following on from this point, the same review article reported that for the HE sector in the UK (based on a recent survey of 70 UK universities), the total income of £168 million was only the 'tip of the iceberg' for consultancy income in HE (Shepherd, 2006). Finally on this point, returning to this research, the fact that 16% of the respondents comprised visiting academics from abroad on student visa's, also skews the results as these foreign staff members may be excluded from pursuing consultancy given their immigration status. Thus, it is difficult to establish a completely accurate view of consultancy income.

Nevertheless, considering Figure 1, just over a third of all consultancy activity undertaken by the thirty-eight respondents was in the most part for income less than £15,000 (36.8%); followed by almost a third (29%) attracting money in the range £15,001 to £45,000. Only a small minority of academics (5.3%) obtained more than £100,000 from consultancy activity. Thirteen percent earned an "other" amount of consultancy money either in excess of £200,000 or payment in extra monetary form. Some respondents provided additional comments in this consultancy section. Five respondents suggested that 'an additional value' to academics engaging in consultancy, was to fund research. Indeed, one of the five respondents stated;

"About 40K [referring to the income obtained] but that covered the employment of a researcher for two years"  
(Web-based Questionnaire Respondent 42123984).

The other four respondents tended to place the monies into an account, which they used to support conference and workshop travel and attendance, thus also suggesting a link to research activities and, to a lesser extent, scholarship. Taken together, these results suggest that the majority of consultancy activity undertaken by the respondents (41%) was small scale, in terms of gross income obtained. However, a strong statistical relationship does exist between areas of research undertaken and consultancy services. Conversely, no statistical relationship exists between what is taught and the nature of the consultancy engagements.

Of the 38 responses, results are clustered in rank order, concerning the key areas of consultancy employed by the respondents:

*Technical / Applied* 'hands on' areas such as E-Business, IS Security, Business Intelligence (Data Mining, Data Retrieval Tools); Internet Spam (creating and preventing); legacy systems integrations with the Internet.

*Managerial areas*, such as Benefits Management; IS Strategy Development, Enterprise Resource Planning; business systems analysis. However, many of these areas have strong theoretical foundations, but they can be perceived as being more of the professional practice side of things, rather than academic.

*Theoretical areas that are emerging*, i.e., Knowledge Management and E-Learning.

Interestingly, the main area of content for consultancy is firmly rooted in and with the technical and applied areas of IS/IM.

A further observation from the results is that none of the respondents mentioned the use of Teaching Company Schemes or Knowledge Transfer Partnerships<sup>10</sup>, the UK Government's flagship programme to encourage collaboration between academia and industry. This might simply indicate a lack of exposure to such schemes. However, interestingly, at least eight respondents had experience of such schemes although they did not appear to see this as a form of income generation or consultancy.

### Perceptions of the Value of Consultancy

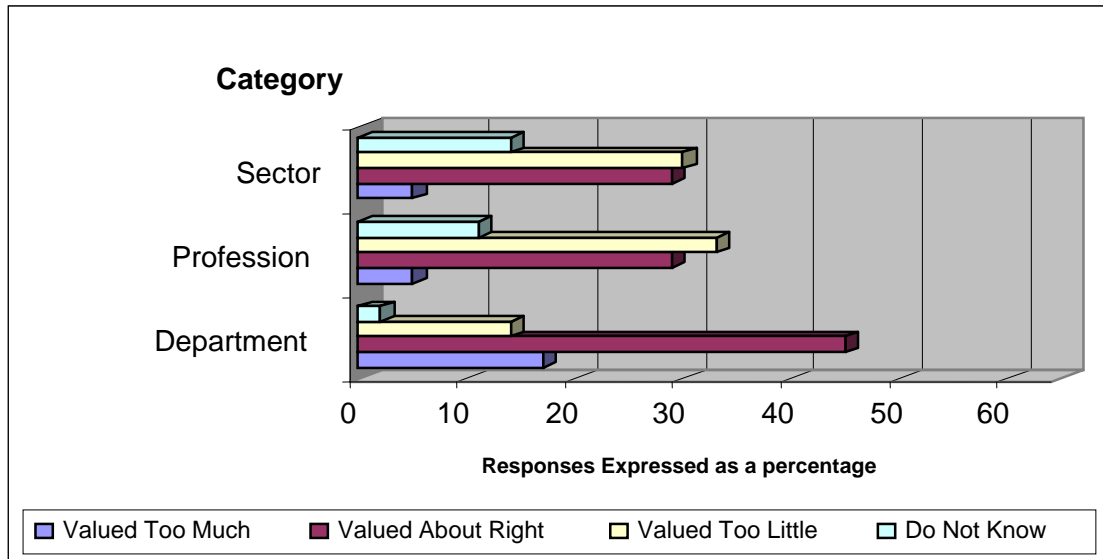
Figure 2 presents the responses exploring the perceptions surrounding the value of consultancy. Nearly half (45%) of the respondents felt that consultancy was valued "about right" by their departments.

Interestingly, a little less than a third of respondents' of how consultancy was perceived as being 'valued too little' by the sector (30%) and profession (33%), illustrated that engagement in consultancy in their view should be valued more as an academic area of activity. The majority of the respondents regarding how consultancy should be perceived in the future, felt that, although important, consultancy should be valued 'a little' by the profession (42%); the HE sector (47%) and by their

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<sup>10</sup> See the KTP Web site for more details of this scheme: <http://www.ktponline.org.uk/default.aspx> (Last accessed 29 August 2007.)

own department/division (49%), but the use of the rating 'a little' does suggest that consultancy should be given less value than given for teaching and research.



**Figure 2: Perception of how Consultancy is valued (n=78)**

In considering the interviews, when all of the twelve interviewees were asked to define what they thought consultancy was, there was a universal agreement and acknowledgement that it related to income generation and knowledge transfer. Consultancy is achieved when an academic provides advice, guidance and solutions to businesses on problems that they face, by drawing upon their expertise, which is usually derived from research, for personal, or usually either for monetary gain or for their department and or their University. The following quotes illustrate this almost universal view:

“I see consultancy more as solving a problem using research to do it, but packaging the process in less academic terms and concentrating more on the product rather than the process of doing it” (UniT5, P2, L24-26).

“Basically, it is a way to bring money in” (UniR2, P6, L23).

The interviewees' view of consultancy remained the same regardless of university type, or how they viewed teaching, or research or scholarship, or the level of the individual's research activity. Consultancy appeared to be a concept that had a (virtually) unanimous meaning attached to it.

Where deviation in and between the interviewee responses arose, it was concerned with why and how academics engage in and with consultancy activities. Views from three academics from the research-led university, tended to report that consultancy (and its allied activities) was an activity which then allowed academics to engage in more mainstream academic research work, i.e. to write up and publish the consultancy experience as a case study. An often-quoted reason for academics undertaking consultancy was to gain good and appropriate access for research opportunities. This access to research opportunities is evident in the following quote:

“From our perspective consultancy allows us to do more research. [How?] It is the means to attend conferences, to travel, to get access, etc” (UniR2, P6, L23-24).

“Tend to see consultancy as being more applied and action centred in approach, this is more interesting to me. Gaining access and making sense of what is happening in a business or sector is more interesting than solving the problem for someone” (UniR5, P2, L30-31).

Three interviewees from the teaching focused university viewed consultancy as a way of 'keeping in touch' with their professional roots and backgrounds and it allowed them to see what was 'going on', which is similar to the minority view of scholarship discussed earlier. Interestingly, this 'keeping in touch' was perceived to give them status by the HE community, in their own minds and perhaps by the students they teach.

All of the interviewees felt that engaging in consultancy activities would enhance teaching (and, by implication, student learning), but that a different set of skills was needed by the academic to bring this knowledge and experience back to the classroom. This can be illustrated by the following quotes:

“Well, the last one we went for us, it was on does Scotland get value for money from the Scottish Library. The experiences and the outputs feed directly into some of our teaching on the MSc” (UniR2, P6, L24-26).

“Bringing consultancy back to lecturing takes a more reflective approach on what was done, how it was done, and why it was done. However, I do not think that every piece of consultancy is a form of research. If you build a new IT system, then that is not research, I am more interested in research that looks at why things were done, not what was done” (UniR5, P2, L31-43).

### Consultancy Activity Informing Teaching Practice

Returning to the web based questionnaire sample, (n=73), experience in and of consultancy, was perceived directly to be benefit teaching. The following in rank order of statistical significance were perceived to be the main ways in which consultancy engagements informed teaching; own experience of doing consultancy (both process and the outcome); access and ability of guest speakers (other consultants) and key people from industry; using others people's experiences via trade news interviews, etc. and finally personally developed case studies of experiences developed by others who have been or are consultants, mainly commercial people.

However, given the small number in the interviewee sample, who reported to be actively engaged in consultancy activities (five of the twelve, from both the teaching and research universities), attempting to draw conclusions regarding possible links and or relationships between teaching and consultancy, care has to be taken when interpreting the following. From the results, all interviews were able to give concrete, insightful and definitive examples of when and how they perceived their consultancy activities informed their teaching practice. The most common ways in which consultancy activity and experience from undertaking consultancy informed teaching practice tended to take the form of personal (lived) case studies derived from personal experiences in consultancy. Nevertheless, these enriching experiences tended not to be formally written up, but were used as illustrations and anecdotes to explain and to a lesser extent entertain students in class, by giving a 'real world' perceptiveness on the material being presented in class, to help students to make and find interconnections between theory and practice in IS/IM. There may be some resonance here with the 'business savvy' academic noted by George et al. (2004)?

However, it became apparent from the results that teaching was perceived to be enhanced and supported by consultancy activities. Nevertheless, due to a lack of examples, it can be concluded that no perceived relationship or link between teaching informing consultancy practice was professed to exist.

### DISCUSSION

The results presented support the idea that as far as this sample of IS/IM academics was concerned, the activity of consultancy was perceived to exist and indeed did inform teaching and research practice. They suggest that the relationship with teaching is comparatively informal, and the consultancy experience is drawn on in an almost opportunistic way in class, rather than following any deliberate plan, intention or policy. In contrast, however, the relationship between consultancy and research, is more formal and deliberate, with the areas being researched feeding directly into the primary areas of consultancy activity. The areas of research interest and the areas in which the academics consult appear to be very similar.

Although all of the participants recognised a nexus between consultancy and teaching and consultancy and research, the appreciation of these associations varied depending on the type of university the participant resided in, and their institution's primary activities. In general, staff within the research-led university sampled appeared to appreciate a stronger association between research and consultancy, compared to the relationship between teaching and consultancy. However, staff from a teaching-focused university tended to see a greater association between teaching and consultancy, compared to that between research and consultancy. This perhaps reflects the broader primary emphasis on teaching in these institutions. It might be anticipated that this situation is particularly likely to be found in a discipline like IS/IM where its origins are traditionally and firmly rooted in the applied, vocational and industry based sectors.

In terms of University policy, these findings are significant. Policy can be influenced and appears to be influenced in three key areas: the research development policy, the cultural philosophy of the University, and its structure. In terms of research development policy, the emphasis or otherwise on academic capitalism and the shift from Mode 1 to Mode 2 alters the nature of the research undertaken to be more applied in nature and more industry focused. Of the same accord, the reporting line and targets of the University can influence whether the policy drives toward esteem factors and research income or whether it drives towards obtaining non-funding council income. In the case of the latter, the departure from 'break even' type research income to the commercial gains of 'other income' (i.e. consultancy) in effect shifts the research philosophy of the institution and therefore the research policy. In this regard, the core difference between applied contract research and consultancy becomes the financial stance in terms of VAT payable, or otherwise, and the ability to make a recognisable profit. Such

developments have major impacts upon the culture of the University, its priorities, and its engagements with students and industry.

Furthermore, there is the cultural philosophy of the University. This domain will reflect the economic and political climate within which the University operates and will influence staff recruitment, priorities and funding. The drive towards recognising and encouraging academic capitalism creates a new kind of academic and has knock on effects in terms of how that academic is supported, measured and contributes to the University work and community. Increasingly "blurred boundaries" between industry and academia may offer "an emerging space for negotiation" in terms of career models for academics (Lam, 2007, p 1013).

A recent phenomenon seen across a host of new Universities has been the restructuring of the University to facilitate more effective and efficient engagement with industry and thus greater opportunities to capitalise on academic capital. Indeed, in some cases these structures and formalised approaches have begun to reflect the actions of global corporate entities, whereby what have previously somewhat hidden small pockets of expertise in University Departments, are later to be spun out into consultancy companies in their own right. The structuring of Universities around enterprise, innovation and business development has brought about new management regimes revolving around Directors and CEOs rather than Deans and PVCs and this has encouraged structures geared towards, sales, market engagement and customer relationship management (CRM) as opposed to a focus on teaching and learning, research and quality.

The University impacts, by their very nature, filter down to department and individual level. In terms of the department it is interesting to see how such corporate signals have been interpreted. The drive by departments to 'commercialise' their work has led to more emphasis on industry links, more focus on packaging and reorientating learning towards industry problems, and less attention to rigor and validity in outward facing engagement. Paying less attention to rigor and validity however may be to the detriment of the sector, given that this rigor and validity is the key differentiator between 'academic capital' and 'commercial capital'. Some however have exploited the University ethos to build consultancy work with value propositions based on academic principles, rigor and relevance, and with an emphasis on building a partnership with industry rather than one off engagements. While the question of 'how' research is conducted by academics is out with the scope of this paper, it is an area which warrants further investigation and will undoubtedly form the cornerstone of the unique selling point (USP) for future academic institutions.

## CONCLUSION

The culture of Universities is changing, and with it the roles, attitudes, activities and skills required by individual academics. The research in this paper focussed upon 'academic capitalism', through individuals from a range of institutions who were embedded in a particular discipline, namely information systems/information management (IS/IM).

The empirical element of the paper was informed by a web-based survey of members of the UKAIS who are individuals who have taught or undertaken research into information systems, and a second phase of data collection comprising of interviews with IS/IM academics in two Scottish Universities. Aware of the somewhat limited nature of the data collected, the authors do not make any claims that the findings are representative of all IS/IM academics, for example across Scotland or the UK. However by focusing on a *single particular discipline*, this work represents a break from earlier work on academic capitalism which has predominantly focused on the (inter)national, regional or institutional levels.

The findings and discussions presented in this paper represent a first, exploratory, step in what may become an evolving stream of research which may be of value to the IS/IM community. In particular, further work is required at a disciplinary and trans-institutional level to examine the nature of these changes in greater depth, what adaptations academics are making, or may be required to make. One promising direction could be to use Brennan et al.'s classification of academic entrepreneur (hero, maverick, broker and prospector) to explore patterns at (say) institutional/ discipline level regarding attitudes of IS/IM academics towards discipline knowledge and relationships (or otherwise) with the systems of their host institutions (Brennan et al., 2005).

## REFERENCES

1. Adams, S. M. and Zanzi, A. (2004) Academic development for careers in management consultancy, *Career Development International*, 9, 6, 559-577.
2. Bannister, F. and Remenyi, D. (2005) Why IT continues to matter: Reflections on the strategic value of IT, *Electronic Journal of Information Systems Evaluation*, 8, 3, 159-168.
3. Benbasat, I. and Zmud, R. W. (2003) The identity crisis within the IS discipline: Defining and communicating the disciplines core properties, *MIS Quarterly*, 27, 2, 83-194.

4. Bernasconi A. (2005) University entrepreneurship in a developing country: The case of the P. Universidad Católica de Chile, 1985-2000, *Higher Education*, 50, 247-274.
5. Bosnjak, M. M. and Tuten, T. L. (2001) Classifying response behaviours in web-based surveys, *Journal of Computer-Mediated Communication*, 6, 3 (April), [Online resource] Available at <http://jcmc.indiana.edu/vol6/issue3/boznjak.html>, [Last accessed 26<sup>th</sup> April 2008].
6. Brennan, M. C., Wall, A. P. and McGowan, P. (2005) Academic entrepreneurship: Assessing preferences in nascent entrepreneurs, *Journal of Small Business and Enterprise Development*, 12, 3, 307-322.
7. British Computer Society (BCS) (2007) What are the right things to do to sustain UK competitiveness in 2025?, *BCS Thought Leadership Debate*, 7 February, [Online resource] Available at <http://www.bcs.org/server.php?show=ConWebDoc.9982>, [Last accessed 25 April 2008].
8. Coaldrake, P. and Stedman, L. (1999) Academic work in the 21<sup>st</sup> Century: Changing roles and policies. Occasional Paper Series (99h), *Higher Education Division. Department Of Education, Training & Youth Affairs*, Commonwealth of Australia, [Online resource] Available at <http://www.dest.gov.au/archive/highered/occpaper/99H/academic.pdf> [Last accessed 15 June 2007].
9. Couper, M. P. (2000) Web surveys: A review of issues and approaches, *Public Opinion Quarterly*, 64, 4 (Winter), 464-481.
10. Couper, M. P. (2001) Web Surveys: The questionnaire design challenge, *Proceedings of the 53rd Session of the ISI*, [Online resource] Available at <http://134.75.100.178/isi2001/>, [Last accessed 6 August 2007].
11. Davis, G. B., Massey, A. P. and Bjorn-Anderson, N. (2005) Securing the future of information systems as an academic discipline, *Proceedings of the Twenty-Sixth International Conference on Information Systems*, 979-990.
12. Deem, R. and Lucas, L. (2006) Learning about research: Exploring the learning and teaching/research relationship amongst educational practitioners studying in higher education, *Teaching in Higher Education*, 11, 1, 1-18.
13. Dhar, V. and Sundararajan, A. (2006) Does IT matter in business education? Interviews with Business School Deans, Working Paper #CeDER-06-08, Center for Digital Economy Research, [Online resource] Available at <https://archive.nyu.edu/handle/2451/14808> [Last accessed 26 April 2008].
14. Dillman, D. A., Phelps, G., Tortora, R. D., Swift, K., Kohrell, J. and Berck, J. (2001) Response rate and measurement differences in mixed mode surveys using mail, telephone, interactive voice response and the Internet, [Online resource] Available at <http://survey.sesrc.wsu.edu/dillman/papers/mixed%20mode%20ppr%20with%20gallup%20poq.pdf>, [Last accessed 22 August 2007].
15. Etzkowitz, H. (2003) Innovation in innovation: The triple helix of university-industry government relations', *Social Sciences Information*, 42, 293-337.
16. Finlay, I. (2004) Living in an 'Entrepreneurial' University, *Research in Post-Compulsory Education*, 3, 1, 417-433.
17. Galliers, R. D. (2003) Change as crisis or growth? Towards a trans-disciplinary view of information systems as a field of study, *Journal of the Association of Information Systems*, 4, 6, 337-351.
18. George, J. F., Valachich, J. S. and Valor, J. (2004) Does information systems still matter? Lessons for a maturing discipline, *Proceedings of the Twenty-Fifth Conference on Information Systems*, 1039-1048, [Online resource] Available at <http://people.cs.uu.nl/virginia/ikuc/George%20et%20al%20Does%20IS%20still%20matter%20ICIS%202004SS02.pdf>, [Last accessed 26 April 2008].
19. Gibbons, M. (1997) Development of science and basic research: The implications of Mode 2 science, in Etzkowitz, H. and Leydesdorff, L. (Eds.) *Universities and the Global Knowledge Economy: a Triple Helix of University-Industry-Government Relations*, Pinter, London, 90-104.
20. Glaser, B. G. and Strauss, A. (1967) *The discovery of grounded theory*, Aldine, Chicago.
21. Haig, B. D. (2004) Grounded theory as scientific method, *Philosophy of Education*, [Online resource] Available at [http://www.ed.uiuc.edu/eps/pes-yearbook/95\\_docs/haig.html](http://www.ed.uiuc.edu/eps/pes-yearbook/95_docs/haig.html), [Last accessed 26 April 2008].
22. Hirschheim, R. and Klein, H. K. (2003) Crisis in the IS Field? A critical reflection on the state of the discipline, *Journal of the Association for Information Systems*, 4, 237-293.
23. Kerr, C. (1963) reprinted as Kerr, C. (1995) *The uses of the University* (4th ed.) Harvard University Press, Cambridge.
24. Lam, A. (2007) Knowledge networks and careers: academic scientists in industry-university links, *Journal of Management Studies*, 44, 6, 993-1016.

25. Lambert, R. (2003) The Lambert Review of business-university collaboration, Final Report (The Lambert Review), HM Treasury, London, [Online resource] Available at [http://www.hm-treasury.gov.uk/consultations\\_and\\_legislation/lambert/consult\\_lambert\\_index.cfm](http://www.hm-treasury.gov.uk/consultations_and_legislation/lambert/consult_lambert_index.cfm), [Last accessed 14 June 2007].
26. Larwood, L. and Gattiker, U. E. (1999) *Impact analysis: How research can enter application and make a difference*, Lawrence Erlbaum Associates, New Jersey.
27. Lazzeroni, M. and Piccaluga, A. (2003) Towards the Entrepreneurial University, *Local Economy*, 18, 1, 38-48.
28. Lucas, L. (2006) *The research game in academic life*, Open University Press and the Society for Research into Higher Education, Maidenhead.
29. McInnis, C. (2000) Changing academic work roles: The everyday realities challenging quality in teaching, *Quality in Higher Education*, 6, 2, 143-152.
30. McNay, I. (1999) The paradoxes of research assessment and funding, in Henkel, M., and Little, B. (Eds.) *Changing Relationships between Higher Education and the State*, Jessica Kingsley, London, 191-203.
31. Mok, K-H. (2001) Academic capitalism in the new millennium: The marketisation and corporatisation of higher education in Hong Kong', *Policy and Politics*, 29, 1, 219-315.
32. Newman, J. H. (1852) *The idea of a University*, London, Longman, Green, (1929 Edition), in Ball, C., and Eggins, H., (Eds) (1989) *Higher Education into the 1990's: New Dimensions*, The Society for Research in Higher Education, Open University Press, Milton Keynes.
33. NCIHE (National Committee of Inquiry into Higher Education) (1997a) Education in the Learning Society, Report of the National Committee (The Dearing Report), HMSO, London, [Online resource] Available at <http://www.leeds.ac.uk/educol/ncihe/>, [Last accessed 14 June 2007].
34. NCIHE (National Committee of Inquiry into Higher Education) (1997b) Education in the Learning Society, Report of the Scottish Committee (The Garrick Report) HMSO, London, [Online resource] Available at <http://www.leeds.ac.uk/educol/ncihe/scottish.htm>, [Last accessed 14 June 2007].
35. Ottewill, R. and Macfarlane, B. (2005) National report for the business education support team explicit and implicit judgement of quality: An analysis of the QAA Business and Management Subject Review Reports (2000-2001), BEST, LTSN Subject Centre, Business and Management, Glasgow Caledonian University.
36. Porter, M. E. and Ketels, C. H. M. (2003) UK competitiveness: Moving to the next stage, DTI Economics Paper No. 3, Department of Trade and Industry, London, [Online resource] Available at <http://www.berr.gov.uk/files/file14771.pdf> [Last accessed 26 April 2008].
37. RCD (2006) Research and Commercialisation Department, Glasgow Caledonian University.
38. Redline, C. D. and Dillman, D.A. (1999) The influence of auxiliary, symbolic, numeric, and verbal language on navigational compliance in self-administered questionnaires, [Online resource] Available at <http://survey.sesrc.wsu.edu/dillman/papers/auxiliary.symbolic.numeric%20paper--with%20cleo.pdf>, [Last accessed 6 August 2007].
39. Ritzer, G. (1996) *The McDonaldization of society revised*, Thousand Oaks, Pine Forge Press, California.
40. Satmetrix (2001) Investigating validity in web surveys, [Online resource] Available at [http://www.satmetrix.com/public/pdfs/validity\\_wp4.pdf](http://www.satmetrix.com/public/pdfs/validity_wp4.pdf), [Last accessed 16 August 2007].
41. Schils, E. (1992) The idea of the University: Obstacles and opportunities in contemporary societies', *Minerva* XXX, 2 (Summer), 301-309.
42. Shepherd, J. (2006), Staff cash in on consultancy, *THES (Times Higher Education Supplement)*, 6 January, 1 and 8.
43. Slaughter, S. and Leslie, G. (1997) *Academic capitalism*, John Hopkins University Press, Baltimore.
44. Slaughter, S. and Rhodes, G. (2004) *Academic capitalism and the new economy. Markets, state, and higher education*, John Hopkins University Press, London.
45. Smith, C. B. (1997) Casting the net: surveying an Internet population, *Journal of Computer-Mediated Communication*, 3, 1 (June), [Online resource] Available at <http://jcmc.huji.ac.il/vol3/issue1/smith.html>, [Last accessed 16 August 2007].
46. Strauss, A. and Corbin, J. (1990) *Basics of qualitative research: Grounded theory procedures and techniques*, Sage, Newbury Park.
47. UKAIS (United Kingdom Academy of Information Systems) (no date a) Charter, [Online resource] Available at <http://www.turningcourse.com/ukais/ukais.cgi?f=charter>, [Last accessed 29 August 2007].

48. UKAIS (United Kingdom Academy of Information Systems) (no date b) Home, [Online resource] Available at <http://www.turningcourse.com/ukais/ukais.cgi?f=home>, [Last accessed 29 August 2007].
49. Zanutto, E. (2001) Web and e-mail surveys, [Online resource] Available at <http://www-stat.wharton.upenn.edu/~zanutto/annenbergl2001/docs/websurveys01.pdf>, [Last accessed 16 August 2007].
50. Zubrick, A., Reid, I. and Rossiter, P. (2001) Strengthening the nexus between teaching and research, Department of Education, Training and Youth Affairs, Canberra. [Online resource] Available at [http://www.detya.gov.au/highered/eippubs/eip01\\_2/default.htm](http://www.detya.gov.au/highered/eippubs/eip01_2/default.htm), [Last accessed 16 September 2003].