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Chapter 10

Business Schools Inside the Academy: What are the Prospects for Interdepartmental Research Collaboration?

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Introduction

Established literature about the role of business schools tends towards more parochial concerns, such as their need for a more pluralist and socially reflexive mode of knowledge production (Starkey and Tiratsoo 2007; Starkey et al 2009) or the failure of management's professionalism project expressed through the business school movement (Khurana 2007). When casting their gaze otherwise, academic commentators examine business schools' weakening links with management practice (Bennis and O'Toole 2005). Our theme makes a novel contribution to the business school literature through exploring prospects for research collaborations with other university departments. We draw upon the case of UK business schools, which are typically university-based (unlike some of their European counterparts), and provide illustrations relating to collaboration with medical schools to make our analytical points. We might expect that business schools and medical schools effectively collaborate given their similar vocational underpinnings, but at the same time, there are significant differences, such as differing paradigms of research and the extent to which the practice fields are professionalised. This means collaboration may prove challenging. In short, the case of collaboration between business schools and medical schools is likely to illuminate the challenges for business schools 'reaching out' to other university departments.

Why is our theme of academic research collaborations beyond the business school important? Business schools may currently be experiencing a 'perfect storm' (Thomas and Cornuel 2012) of falling MBA numbers and also deep concerns about their legitimacy and what kind of knowledge it is that they produce (Ghoshal 2005: 75). UK business schools are located within publicly funded universities, sitting alongside longer-established academic departments for which the canon of academic research is taken for granted (we recognize other countries display a different

institutional pattern). The question may be asked inside the university: do business schools produce knowledge with conventional features of social science (Starkey and Tempest 2008; Thomas 2009) and how might this relate to forms of knowledge produced by other university departments?

The UK business school sector has experienced two decades of research capacity building, with new professional associations (e.g. British Academy of Management), its own peer reviewed journals (e.g. *British Journal of Management*) and major investment by the ESRC (Economic and Social Research Council) in the Advanced Institute of Management Research (AIM). Given this sustained investment, we anticipate maturing business schools would by now have developed their social science research base, and be reaching out, or 'lowering its walls', with respect to collaborating with other university departments. The latter meanwhile, given the pervasiveness of organization and management problems across all domains of life, may increasingly look to business schools to help address these. Is this too optimistic a scenario? Khurana's (2007) pessimistic conclusion, however, is that the professionalization of management project inherent in the missions of business school has failed, including its attempt to build a science base on the medical school model. This failure might imply business schools would migrate back to a dominant concern with how they relate to business practitioners, as called for by pro-practice critics (Bennis and O'Toole 2005), and sideline what were weakly developed forms of academic research.

Given their recent growth, business schools may be among the largest and most profitable departments in some universities. But how do they interact with other academic departments, especially in research? Are they co-operative or 'stand-alone'? Other academic departments may acquire negative stereotypes of business schools, seeing them as dominated by teaching,

executive education and consulting. Business schools may concentrate on building and ring-fencing their financial surpluses, neglecting the fundamental research base needed for wider legitimacy within the university.

Various reformative projects have been proposed. The public interest model of the business school (Ferlie et al 2010), for example, asserts that business schools should promote a form of 'public social science' (with conventional notions of blind peer review; declaration of financial interests or sponsorship and eventual publication in publicly accessible journals) in their knowledge production. This stance distinguishes them from alternative knowledge producers operating in a crowded field (such as management consultants and think tanks). In pursuit of a niche position in the face of competition from other knowledge producers, business schools might take account of research policy literature. This highlights knowledge production trends as favouring more thematic and inter-disciplinary modes to tackle cross cutting themes and promote radical innovation. If so, the capacity of business schools to develop fruitful inter-disciplinary research collaborations becomes a strategic issue for them.

We suggest that collaboration across different academic disciplines may be complex. The epistemic wall (Knorr-Cetina 1999) between different disciplines is a barrier to multi-disciplinary research, as in the sometimes fraught relationship between the natural and social sciences (Redclift 1998), each with distinctive research models and assumptions about the nature of knowledge (Campbell 2005). These epistemic differences may create inter-disciplinary conflicts (Choi and Pak 2007). Base disciplines may be seen by academics as more legitimate and influential than multi-disciplinary research, thus inter-disciplinary journals are often viewed as of lesser quality than uni-disciplinary ones (Campbell 2005). We should also consider the

relative power balance between disciplines (Becher 1994; Choi and Pak 2007) and how that might affect willingness to collaborate.

We start this chapter on business schools' research engagement with other academic departments with a broad theoretical framing. We then explore some organizational literature on inter-organizational co-operation and then science policy literature that charts the rise of inter-disciplinary research.

After describing our methods, we present preliminary data on UK business schools' research partnerships within universities. We examine reported patterns of inter-departmental research collaboration. We take the example of reported joint research between business schools and medical schools, finding evidence of two distinctive subgroups of stand-alone schools and active collaborators. Two case studies of collaborative schools are provided with an analysis of dynamics correlated within greater research collaboration. This exploratory study concludes by elaborating a forward looking research agenda in this important and neglected area.

A Review of Two Relevant Literatures

Literature on Inter-organizational Networks and Collaboration in Public Service Settings

Research alliances between business schools and other university departments are a form of inter (or intra) organizational collaboration (at least in the UK case; the pattern may be different elsewhere) within public services organizations, rather than between private firms. We thus draw upon a literature examining networks and inter-organizational collaboration within public management (Klijn 2005) studies to orient our empirical work.

Klijn (2005) highlights two theories which might explain the development of networks within public policy settings. Firstly, resource dependency and exchange theory (Pfeffer 1981; Aldrich 2007) argue organizations develop networks to protect key flows of resources. However, the bulk of a university department's income comes from teaching fees, and business schools typically occupy a 'cash cow' role here, around which they are not reliant upon other university departments so this may be a weak motivator for cross departmental research. Rather, they are more likely to network with business firms, whose resources are more significant linked to the development of teaching income. Secondly, political science literature (Rhodes 1988; Marsh and Rhodes 1992) suggests 'policy communities' (e.g. the science policy or business policy communities) develop dense, integrated and also closed networks, cut off from each other. In university settings, dense epistemic networks tend to occur within the basic disciplines rather than between them (Knorr-Cetina 1999; Becher and Trowler 2001). Thirdly, strong public policy networks are likely to emerge under conditions of joint production and systemic 'wicked problems' (Ferlie et al 2011) such as devising an interagency response to the cross cutting climate change policy problem. Yet cross over activity between university departments is often small scale or relatively simple (e.g. joint degree programmes) so this theory may be only weakly relevant.

If these three theories of network development in public management settings are not fruitful, which angles might potentially be more promising? A first question is whether a business school indeed has the strategic intent – either formally announced in a plan or emerging in collective faculty behaviours – to build research collaborations within the university as a key objective. Ferlie et al's (2010) typology of different business schools suggests that this orientation is a distinguishing characteristic of the 'public interest' model which defends traditional notions of

‘public science’ within the academy, but we can’t assume that other university departments hold such strategic intent. Further, it may be that groups of schools may be on distinct trajectories, including in their approach to research strategy, i.e. they do not all conform to the ‘public interest’ school (Ferlie et al 2010). Highly institutionalist explanations of the business school field as characterized by many ‘fashions’ and of strong isomorphism may prove of limited value, since there may be considerable variation in research strategies of business schools, including scope for local innovation and experiments (Starkey and Tiratsoo 2007) or even strategic choice. We return to these theoretical issues in the concluding discussion. Let us assume that empirically some business schools populate the ‘public interest’ box. For these schools, the question is how to realize their strategic objective of building academically oriented research, likely to include building collaborations within the academy in order to maximize academic impact.

The knowledge-based view of strategy is explored here as a theoretical framing, including the resource-based view of the firm (Barney 2001; Wernerfelt 2006). Eisenhardt and Santos’s overview (2006) draws on mainly private sector based literature which sees knowledge as a strategically significant asset for the modern ‘firm’, and the capacity to mobilize it as a core competence. They cite Cohen and Levinthal’s (1992) concept of ‘absorptive capacity’, defined as an organizational ability to recognize the value of external information, assimilate and apply it to commercial ends. Where the academic environment is volatile and research collaborations shift, the ‘dynamic capabilities’ (Teece et al 1997) concept becomes important, defined as the firm’s ability to integrate, build and reconfigure internal and external competences to address high velocity environments. Knowledge sourcing activity is an important competence addressed in the literature, often based within externally facing networks which provide a diverse range of

contacts which help to access and integrate new knowledge quickly. The process of internal knowledge transfer within a firm is also important, focusing on the nature of the relationship (and how it is shaped) between the sender and recipient of knowledge and knowledge brokering.

Another theme in the knowledge-based view of strategy is the role (if any) of incentives and top management pressure in stimulating internal knowledge transfer (Eisenhardt and Gahmic 2000) as well as bottom up collaborative processes (critical for powerful groups of professionals and knowledge workers). This theme is relevant because the central core in many UK universities seeks to increase its capacity to steer the university (Ferlie and Andresani 2009) and within the research domain there may be more centrally sponsored attempts to bring academics from different departments together in novel multi-disciplinary and thematic arenas. As other parts of the university may decline during a recession, some business schools are absorbing more subjects, e.g. law.

Research Policy Literature: More Thematic and Inter-disciplinary Research

We now review a separate research policy literature which suggests a long-term growth of inter-disciplinary research in academic settings, notably within science and engineering (Cummings and Keisler 2005). This shift is seen as promoting creative and radical innovation to a greater extent than possible within one discipline. Many current scientific and social scientific agendas are broad and thematic in nature (e.g. climate change; an ageing society; new genetics technologies with their social and ethical implications) and cross conventional disciplinary boundaries (Starkey et al 2009).

Various ‘pull’ factors from the wider domain of science policy may be pulling business schools into inter-disciplinary research collaborations. National UK science and research policy (and

funding) has moved towards broad and thematic areas. Internationally, governments seem dissatisfied with the science/society interface and seek to accelerate science led economic growth by taking increasingly interventionist stances in funding streams (Nowotny et al 2001). This perspective is reinforced by the ‘triple helix’ model (Leydesdorff and Meyer 2006) which sees government, as well as science and industry, as a major player in a co-evolving knowledge production system.

Research Councils UK currently stresses broad thematic areas such as: energy; global food security; global uncertainties; security in a changing world; living with environmental change and lifelong health and wellbeing. The UK Government’s *Innovation and Research Strategy for Growth* (BIS 2011:16) states: ‘as innovation is increasingly driven by challenges such as climate change and the ageing population, the Government will back challenge led innovation in these areas to drive interdisciplinary collaborations to develop new business models, products and processes’. For example, a major research call in autumn 2012 from the EPSRC/ESRC for proposals on the digital economy explicitly asked the established community of natural scientists who bid to link up with economists and management scholars in broad multi-disciplinary teams.

A recent definition of inter-disciplinary research is provided by Rhoten and Pfirman (2007, quoted in van Rijnsoever and Hessels 2011:464):

‘inter-disciplinarity refers to the integration or synthesis of two or more disparate disciplines, bodies of knowledge or modes of thinking to produce a meaning, explanation or product that is more extensive and powerful than its constituent parts’.

Van Rijnsoever and Hessels' definition (2011: 464) suggests in a similar vein that inter-disciplinary research represents: 'the collaboration between scientists from different disciplines with the goal of producing new knowledge'. There are severe challenges in overcoming conceptual and methodological boundaries between different fields of research (Huutoniemi et al 2010) or distinctive epistemic disciplinary based communities (Knorr-Cetina 1999), to realize any vision of inter-disciplinarity.

So, is a novel mode of scientific knowledge production emerging in which traditional disciplinary boundaries erode? The general science policy literature (Hessels and van Lente 2008) reconceptualizes the production of scientific knowledge. Two models in particular discuss the possible growth of inter-disciplinary science. First, a well-known literature explores a possible transition between a mode 1 (based on traditional academic disciplines) and mode 2 (dispersed and socially pluralist) knowledge production (Gibbons et al 1994; Nowotny et al 2001) with the greater involvement of non-academic stakeholders. Commentators write of a new mode of trans-disciplinarity which goes beyond multi-disciplinarity in the sense that the interaction of scientific disciplines is much more dynamic. Once theoretical consensus is attained, it cannot easily be reduced to disciplinary parts' (Hessels and van Lente 2008:741).

Nowotny et al (2001:106) briefly discuss multi-disciplinarity as well as trans-disciplinarity. They note there has always been multi-disciplinarity within mode 1 knowledge production, but there appears to be a shift towards combining more historically non-adjacent disciplines, possibly because of the transfer of technologically sophisticated instrumentation from one field to

another. Ziman (1994, 2000) has developed a model of 'post-academic science' in which science becomes a more collective activity, with more co-writing of articles. In addition, this model assumes 'both the practical and fundamental problems that scientists are concerned with are trans-disciplinary in nature, calling for collective effort' (Hessels and van Lente 2008:746).

The research policy literature reflects on how to manage the complex research collaborations implied by these models. Bammer (2008) explores how to manage intellectual and other differences between partners. Cummings and Kiesler (2005) point to the high transaction costs in many multi-disciplinary research projects, especially when conducted virtually rather than face-to-face. Van Rijnsoever and Hessels (2011) explore factors associated with both inter-disciplinary research collaborations. Interestingly, they found that disciplinary collaborations, i.e. with colleagues in the same discipline but at different institutions, occur more in basic disciplines and that inter-disciplinary collaborations (across different academic disciplines) occur more in strategic disciplines; we suggest these might include business and management research.

This debate in the science policy literature has operated at a high level of generality. Some authors have creatively transferred concepts from this literature stream into the debate on the future of business schools, with the mode 2 model proving a most influential import (see Starkey et al 2009). The business school literature has paid less attention to the literature on mode 1 based inter-disciplinarity, which is our focus here. Several questions emerge from the science policy literature. Within the domain of management studies, is there really a trend to broad thematic research questions which bring different disciplines together? Do concepts and instruments readily move into and out of business schools to and from other disciplines? Do

radical scientific breakthroughs really occur within large multi-disciplinary teams involving management scholars?

So we have argued that mode 1 style research co-operation between business schools and other university departments has been under studied in the current business school literature. Our initial literature review suggested theoretical perspectives drawn from the literatures on collaboration in public services settings, from the knowledge based view of strategy and on science policy might help with a theoretical framing.

In this modest exploratory study, we gathered data to address the following three objectives:

- Descriptively to map the pattern of reported research collaborations between UK business schools and other academic departments;
- To examine an area of strategic significance in greater depth: namely research interactions between business schools and medical schools;
- To present early case study material on two promising sites for such interactions.

Methods and Data

We here draw on three sets of UK business school data largely collected through the Association of Business Schools (ABS) with its ready access to the UK business school community:

- (1) An ABS survey of UK directors of research focusing on cross-departmental research collaboration with other departments and within thematic clusters. Thirty-five institutions responded by January 2012. See: http://www.surveymonkey.com/s/ABS_RESEARCH

- (2) A small scale institutional audit of a key group of business schools to gather information on reported joint research with medical schools.
- (3) Two mini case studies of business schools which reported high levels of research collaboration with their local medical schools. These early cases are based on the authors' local knowledge rather than any primary interviews.

Survey Findings

We received 35 responses from the web survey, giving a response rate of 32%. Results are provided in figure 10.1 and figure 10.2. If we cluster 4 and 5 rated responses together to indicate 'high collaboration' areas, only economics approaches the 45% mark and may well be partly internalized within the business schools anyway (although some deans are insistent that economics exists as a separate department outside the business school). Economics can be seen as a special case. After economics, there are reasonably sized clusters (20-25% of respondents) of high collaboration reported with engineering, medicine, law, psychology, sociology, and the arts. Given only 30 universities in the UK have medical schools, there is high co-operation reported within that group. The low reported co-operation with geography is surprising given the importance of the sustainability thematic cluster, however, business schools may increasingly employ such expertise directly within a faculty group concerned with corporate social responsibility for example. There is less collaboration with law – another important professional school – reported than we had expected.

Generally speaking, the survey results suggest low levels of inter-disciplinary collaboration and of ‘high walls’ around business schools. We lack comparator data in the survey from non-business school departments in the social sciences, but UK business schools look ‘silo-like’, as more than one respondent confirmed:

‘The business school seems quite ‘silo like’ and isolated from other departments with the partial exception of the medical school. Business school staff rarely think in terms of applying for large ESRC grants and tend to work on quite small scale research projects. Their co-operation appears to be with other business school staff in other universities rather than other departments in the College’.

The absence of collaboration reported with philosophy may reflect either the neglect of ethical questions within business schools, the closure of departments of philosophy or the incorporation of ethics and philosophy of science within business school faculty. There appears to be further scope to collaborate on research with biological and physical sciences with which collaboration is ranked the lowest, but around which, for example, there may be a research agenda linked to knowledge mobilization and the translation of innovation.

In terms of thematic clusters, sustainability and then the related field of corporate social responsibility (CSR) are the most frequently reported sites for collaboration (which should encourage stronger research collaboration with geography), followed by health care (medical schools); leadership and ethics (psychology), and public policy (political science). Some small scale themes such as ageing and poverty may gain greater attention as the public expenditure

reductions bite and as an ageing population and social care become more pressing political and financial issues.

Survey respondents provided examples of supportive mechanisms being developed by the university centre to encourage cross-departmental research collaboration such as the establishment of inter-disciplinary centres, e.g. an energy institute. Several business school directors of research referred to cross university societal challenges which were supported with limited internal funding for collaborative projects. Several universities have appointed staff who work on cross-disciplinary opportunities. In other universities, there appears to be a more *laissez-faire* approach with research clusters emerging as a bottom-up phenomenon. It still appears challenging to operationalize inter-disciplinary research in a funding system that has not yet institutionalized these demands:

‘It is very difficult to get funding in a multi-disciplinary area from a funding body. There is a lack of qualified referees to review as each one is expert in their own discipline’.

The narrow focus on A-rated specialist journal outputs and the lack of knowledge about journals for inter-disciplinary research appear to be major factors that act as disincentives for interdepartmental research collaboration:

‘As a business school, we mainly look for top journal publications. Other departments sometimes focus on other outlets’.

Respondents talked about researchers from disciplines outside the business school speaking a different language with different cultures:

‘Different disciplines have evolved using their own terminology and “ways of doing things” as well as different expectations’.

The variability of research track records between units, lack of time, and poorly articulated synergies, were cited as other restraining forces. Centralized performance management systems around publication in top management journals for the national Research Excellence Framework assessment exercise appeared to have particularly strong impact, although we note such forces are emerging elsewhere as global competition between business schools intensifies:

‘Instrumental pressure of publications for the Research Excellence Framework and limited research workload, coupled with high administration demands on time, leave little time for research development activity as a long-term approach’.

Some respondents suggested business school faculty would benefit from informal networking opportunities with possible partners in other schools. They advocated greater awareness of interdisciplinary funding opportunities, as well as more information on the research profiles of faculty outside the business school. They suggested new resource allocation models that encourage interdepartmental partnerships to break down a silo mentality would be helpful.

When asked how the university supports interdepartmental collaboration with business schools, respondents observed:

‘The university has set up a number of university wide inter-disciplinary research themes as part of its refreshed strategic plan. Participation is encouraged but not mandatory. However, the university will use KPIs to measure the extent to which cross faculty work is taking place’.

Despite such intervention, however:

‘The university defines “grand challenges” which require the creation of cross-departmental research projects. Most projects, however, originate from direct department-to-department contacts’.

In the next section, we explore the results of a small scale institutional audit on intra-university research collaboration between business and medical schools which emerged as an important area in the survey.

Management and Medical School Research Interactions: An Institutional Audit

This major theme has been underexplored so far. There is some early case material. Kastor (2004: 85) describes high low levels of interaction between the Academic Health Centre(AHC) in the University of Pennsylvania and the neighbouring (and prestigious) Wharton School (including its health economics and health management groupings), combined with the AHC’s

high use of management consulting, but there appears to be little material of a more systematic nature.

In teaching, there is a growing collaboration between business and medical schools, particularly in the USA at postgraduate level. Freudenheim (2011) notes the reasons for this: '[u]nder heavy pressure from government regulators and insurance companies, more and more physicians across the country are learning to think like entrepreneurs'. Knight (2012) also observes that 'when issues such as the rising cost of health insurance and an ageing population dominate the political agenda, many students are...augmenting their medical education with a joint MD/MBA. In 1993, there were five programmes in the US; today there are 65, according to figures from the Association of MD/MBA Programs (AMMP)'. Such dual degrees in medicine and management are offered by top schools such as Columbia, Dartmouth, and Cornell. In Europe, Sweden's KarolinskaInstitutet became the institution to offer joint medical and business degrees. Indeed, *The Economist* (2011) suggests that business schools that are not élite may leverage their university's medical school to provide niche medical education with management: 'To compete for students from the wider world some schools may need to specialise...Take the Olin Business School at Washington University in St Louis. It is popular within its region, but has found it harder to attract students from farther afield. With a renowned medical school at the university, it would seem perfectly placed to appeal to students anywhere interested in medical-sector management'. Business schools could look to medical schools for pedagogic models. Nohria (2012: 38), Dean of Harvard Business School, suggests that '[t]he clinical experience gained by fledgling doctors is an ideal example of how professional schools address the "knowing-doing gap"' which is partly being addressed in the Harvard Business School MBA by a new Field Immersion Experiences for Leadership Development program '[t]o give MBA students a dose of

real-world experience'. In Imperial College London at undergraduate level, the Business School London offers a BSc Medical Sciences with management in collaboration with the Faculty of Medicine. Students decide to come and study at the Business School in either the third or fourth year of their medical degree to equip future clinicians with an understanding of the management issues facing the health system.

In order to conduct an institutional audit of reported research links in the UK, we emailed a subgroup of 11 UK business schools with high levels of research income (at least€1.2m in 2009/10: Source: HESA)and which also contained a medical school located within the same university. Eleven responses were received. Interestingly, they clustered into two strategic subgroups: no/minimal reported research collaborations (4) and substantial reported collaboration (7). This indicates that business schools in roughly similar circumstances may be exercising some strategic choice or, at least, be on local path dependent tracks.

Table 10.1summarizes the reported research interactions.

See Table 10.1

Unsurprisingly, a range of research areas was reported, reflecting in part the presence of local academic champions and traditional areas of strength. A cluster of cross site themes included: translational research (i.e. moving clinical research 'from bench to bedside'); diffusion of innovations; organizational development; patient safety and service issues; and service delivery and organization (linked to a National Institute of Health Research(NIHR) programme with substantial external and peer reviewed research funding). One site reported an NIHR funded project with two principal investigators – one each from the business and medical school. We

suggest that this is evidence of novel ‘hybrid knowledges’ which help link business and medical schools’ research activities.

Two Case Studies of Sites with Promising Research Interactions Between Business and Medical Schools

What might be the local contexts, structures, processes and actions which favour collaborative research relationships between business and medical schools? We now introduce two case studies of promising higher education institutions(both from our high collaboration group), before making comparative remarks.

Case Study 1

This case is set in a long established, research intensive, multi-faculty University which contains Arts, Social Sciences (including Management), Natural Sciences, and a large, old and prestigious Medical School. The Medical School was recently designated an Academic Health Sciences Centre (one of only five nationally). Its AHSC application mentioned potential synergy with the rest of the University, including the social sciences such as Management. The strong mental health element includes well developed research on social and community psychiatry (including user involvement) as well as trials of new drugs. It has a social science orientation (e.g. psychology), as does primary care and public health (which is open to medical sociology). These are social science ‘friendly’ components of the Medical School, in terms of their own interests and epistemologies. The Medical School is developing activity in Health Policy and Evaluation and Improvement Science to complement traditional biomedical research.

At the meso level, the School of Social Science is keen to foster research alliances with the Medical School and health is a major sector for it as well. At departmental level, the self-descriptor of the 'Department of Management' (as opposed the 'Business School') indicates that it focuses on public services organizations as well as private firms. It was a strong RAE 2008(Research Assessment Exercise) performer. Although it still operates on a medium scale, it generates a moderate surplus. There is a strong stream of research work in the Department on human resource management, including in public sector settings. It offers an MSc in Public Sector Management (PSM) and has built up a PSM group of faculty that teach on it. There are (small scale) cross departmental flows of MSc students with some modules open to Medical School students. There is limited cross departmental supervision of PhD students (mainly from Management into Medicine).

Joint research with the Medical School has been developed over time by a small cluster of senior (professorial level) staff in the department with long standing personal research interests in health care management. A few senior professors in public health and psychiatry have also helped orchestrate contacts and collaboration from the Medical School into Management. This bottom-up yet senior level 'push' for collaboration has so far proved more influential than a formal top-down research strategy which is so far weakly expressed. Patient safety, health policy and evaluation, and service improvement arenas in the Medical School have all proved fruitful in stimulating personal contact, dialogue and in some cases research bids from a small number of Medical School and Management Department staff working across conventional departmental boundaries. Significant local charitable and NHS funding has been obtained which energizes such collaborations.

For these senior professors in Management, access to major AHSC sites may be helpful for their own research agendas. Such sites can be used for empirical research. These professors could also be named as co-investigators on large scale grant applications regularly going in from the Medical School which has a competence in spinning out large scale, multi-disciplinary bids to the National Institute of Health Research (NIHR) with its very considerable budgets (about €12bn pa). Within the Medical School, various ‘pull’ factors were evident. There were some senior reflective managers, either general managers or clinical managers, who found management research useful in thinking about how to manage their organizations (e.g. HRM strategy). The AHSC was in its early stages of organization development or leadership based research. Health policy and evaluation were developing as major new research areas within the AHSC, complementing traditional biomedical research. With the emergence of new and behavioural sub-disciplines or ‘hybrid knowledges’ (health services research; patient safety and quality research; improvement science; now implementation science), opportunities were arising to link aspects of social science (including organizational level analysis) with the clinical sciences within large scale and multi-disciplinary research bids. Future challenges include ‘scaling up’ the relatively limited research collaborations and discussing openly and constructively remaining knowledge.

Case Study 2

This case is set in a research intensive, multi-faculty University established in the 1960s. The University has strong research led departments across all faculties. The Medical School, however, is a more recent development. This is a significant factor regarding the Medical School’s stance towards collaboration with other departments, including the Business School. It cannot yet compete with the well-established medical schools. It seeks, therefore, to develop a

‘niche’ position for itself, including leadership and innovation, an area in which the Business School excels.

The Business School is a major part of the University with a well-established reputation internationally for research, teaching and corporate engagement. It has enjoyed autonomy from central control beyond that experienced by most university departments. Like many business schools, Case 2 is expected to produce a large cash surplus for strategic investment across other University departments, and to develop new collaborations which boost its income and that of other University departments. Like many business schools, it now draws many of its students from outside the UK and is being encouraged to align with University strategy for international ventures in developing, but fast growing economies. So the Business School is seeking to develop a research focused institute in one of these fast growing economies, and has identified healthcare management research as one of three strategic themes under-serviced within the developing country. Like the Medical School, the development of collaboration for the Business School is driven by the interest and expertise of the academic faculty it is able to recruit.

However, in contrast to the Medical School, the Business School is perceived to have ‘high walls’ and many academic faculty remain ‘inward looking’ in seeking academic collaboration. For many of these academics, the pluralist nature of the Business School, particularly regarding other social science disciplines outside their own, combined with a more theoretical orientation towards knowledge development (rather than applying knowledge in practice), means they see little need to engage other departments such as the Medical School. In comparison with Case 1, the Case 2 Business School is a ‘business’ rather than management school, with a strong corporate culture and orientation towards the external corporate world. Reflecting this, its academic faculty and students are concentrated in the areas of marketing, strategy, accounting

and finance. Public services management, and more specifically health services management, has traditionally been viewed as a relatively peripheral interest, in part because it has not generated the financial surplus expected for a business school. Public services management has traditionally been institutionalized within the Business School structure as a distinctive teaching group. With respect to a relationship with the Medical School, the Business School is favourably regarded by senior management in the Medical School as a partnership worth pursuing. However, the detail of this has not been progressed until recently. At a level below Medical School senior management, there has been some resistance to working with the Business School around the areas of leadership and innovation, which might be perceived to represent relevant expertise to be offered by any business school. Such resistance occurs on the basis that, historically, Business School research and education offerings have proved insufficiently contextualized. Instead, the Medical School has tended to look towards the Engineering School for niche management expertise in areas such as re-engineering care and 'lean'.

In summary, until recently collaboration between the Business and Medical Schools has been focused on a very limited number of funded academic research projects which have not been sustained or joined up into more institutionalized arrangements. However, there have emerged two potentially more substantive arenas for collaboration. On the 'pull' side, there is significant funding for education and research around leadership and innovation which has caused the Medical School to look more towards the Business School. In particular NIHR funding for translational initiatives, such as Collaborations for Leadership in Applied Healthcare Research and Care (CLAHRC), an area in which the Business School has significant expertise, has pulled the Business School and Medical School together. Meanwhile, executive education opportunities in the healthcare leadership area are many, and the Medical School has sought to collaborate

with the Business School in pursuit of these, with an associated research agenda. On the 'push side' as part of overall investment in the Business School, first, academic faculty have been recruited with strong research in cognate areas for health services management, now emerging as one its research strengths. Interestingly, the public services management teaching group has been disbanded, with faculty distributed across the Business School, although the health services management faculty all 'mainstreamed' into the same teaching group, which focuses upon innovation. Included in the new recruits are academic faculty with significant engagement with applied health services research, including working with Medical School faculty in more prestigious medical schools, which Medical School faculty beyond its senior management recognize as exhibiting the necessary contextualisation to healthcare. Following meetings with the Medical School Dean and Pro-Deans, one of the 'senior' professors within this group of new recruits acts as the 'broker' between the Business School and Medical School, and is now part of the Medical School Advisory Board. In part, his motivation is that research funding in medical and other clinical sciences is larger than in social sciences, and through collaboration with the Medical science, he and colleagues can access such funding. At the same time, secondly, the host university has developed high level, university wide themes, around which it expects interdisciplinary collaboration, including healthcare. This is led by one of the senior Medical School professors, and he has invited the newly recruited senior professor in the Business School to play a significant role in the development of the healthcare theme. Meanwhile, other healthcare management experts in the Business School play key roles in an emerging institutionalized (risk sharing, investment sharing, income sharing) partnership between the Business School and Medical focused upon leadership, and an international initiative led by the Medical School, which encompasses organization and management in resource poor settings, specifically Africa.

The challenge for the Medical and Business Schools in this HEI (higher education institution) is to deliver research and education income, to develop and sustain the collaboration on the ground. In the absence of this, Business School and Medical School collaboration may prove a mere dalliance, as other more fruitful collaborations are realized with other departments.

Comparative Analysis and Discussion

Looking across these two cases, we make the following remarks. Our judgement was that research collaboration could be assessed as moderate/high in Case 1 and as high in Case 2. Why might this variation be the case?

At a substantive level, both sites displayed three common features which seem to promote collaboration: a Public Services or Health Services Management group of faculty (so there are faculty with an interest in working in public sector settings such as the NHS); active knowledge brokering from a small number of senior professors (so agency as well as structure is important); and linking hybrid knowledges (e.g. leadership; organizational development and change; implementation science; translational research) where both sides had a real interest in collaboration connected to income opportunities from policy sources.

In contrasting the two sites, the Business School in Case 2 was bigger, more operationally autonomous and had a bigger surplus. It was sometimes described as having ‘high walls’, which might well be seen as a negative factor. This negative appears to have been overcome, however, in Case 2 by three positive factors. The first was the nature of the Medical School which in Case 2 was new, still building its profile and seen as more flexible and willing to invest in niche areas: in essence, having ‘low walls’ around it. We suggest that where medical schools are more

established and prestigious, they might regard the business school with some disdain as a ‘trade school’ with little academic credibility. In this regard, Case 1 might prove more challenging for those senior academics in the Management School that sought to progress collaboration with the Medical School. The second was a more articulated strategic framework at university level which reinforced the activity of professorial brokers at field level, marrying a top down push and bottom up activity. Finally, we highlight a series of opportunities that were aligned with both the research and education mission of the Business School and Medical School that represented significant streams of income from government policy sources. We note this final factor, whilst common across the two cases, appears particularly important to draw the business school into collaboration, given its traditional ‘high walls’.

See Table 10.2

Research collaborations between business schools and medical schools may be a positive outlier (see our data in figure 1 and figure 2) when compared to research collaborations with many other university departments, including in the social sciences which superficially might appear more promising. Why might this be the case? Firstly, there appears to be ‘win-win’ situation whereby medical schools acquire access to important organizational and management knowledge; whereas management or business school researchers acquire access to major empirical sites and large research grants. Secondly, there are at a deeper level, hybrid knowledge, which cross these boundaries intellectually and form an arena in which both sites can engage in dialogue. Thirdly, there are some high status academic journals recognized in both domains which act as ‘boundary objects’; it is possible to publish jointly and in a journal recognized in both medicine and social science. However, we suggest it is the emergence of significant sources of policy funding, for leadership education and translational research, that appears particularly influential in driving

inter-disciplinarity. This explains why collaboration may be realized now compared with past non-collaboration.

In future work, we would seek to theorize these substantive findings more explicitly, drawing on the heuristic of receptive and non-receptive contexts for change (Pettigrew et al 1992), originally developed in UK health care settings. This model suggests that organizational ability to progress strategic change is shaped by a configuration of various interrelated ‘signs and symptoms’ of receptivity (rather than one single variable), some of which seem *prima facie* relevant to developing research collaborations across the medical school and business school interface such as: key people leading change; change agenda and its locale; co-operative inter-organizational networks; supportive organizational culture. We return to this discussion in the conclusion.

Insert figure 10.1 and figure 10.2 here

Concluding Discussion

This exploratory study examined inter-disciplinary mode 1 research occurring between university-based UK business schools and other local academic departments. This prism has not so far been apparent in the business school literature, which has been more concerned with mode 2 research (Starkey et al 2009). We started to plot the reported map of UK business school engagement in interdepartmental and thematic research. Except for the special case of economics, the number of reported ‘high collaboration’ areas looks modest. We speculated that there are still ‘high walls’ around research in many business schools. We looked in more detail at research interactions between business schools and their local medical schools as a strategic exemplar, finding preliminary evidence of two distinct subgroups of ‘collaborative’ and ‘stand-

alone' business schools. Our two case studies of collaborative business schools started to uncover the conditions and processes associated with collaborative research relations.

Developing a Future Research Agenda

Where might future research work on this important and neglected theme of business schools' academic research collaborations best be concentrated? We need first of all a more extensive, structured, and internationally oriented literature review on business school research collaborations to map the existing terrain. American and European research intensive universities also contain a range of academic departments, which include major business schools, so a search of the international (as well as UK based) literature to uncover and synthesize existing work is an important first step. It is possible that this search might conclude that not much has been published so far.

Secondly, further survey based work to extend our initial findings should be undertaken, preferably on an international basis. This work should seek to construct a typology of business schools in terms of their underpinning research strategy and orientation and identify how many emphasize inter-disciplinary academic collaborations and the correlates of that stance. For example, do schools in UK Russell Group (research intensive) universities report more collaboration than teaching intensive institutions? Is there also variation within Russell Group sites?

Thirdly, we need more intensive and focused empirical work in key collaborative areas which early work indicates are interesting. More work on business schools' research links across to the other big professional schools of medicine and law should be a priority. The research interface

with health care and medical schools already appears from our exploratory study as a key area. But what about collaboration with law schools? The apparently low level of research collaboration with geography is curious and needs exploring given the reported importance of sustainability/CSR as a theme. Work on research collaboration with arts may shed light on any attempts to ‘humanize’ the business school. There is the intriguing question of joint research with other social sciences which are close in disciplinary terms to business schools such as sociology, politics, international relations but where, apart from the special case of economics, links appear to be weak. The role and extent of influence of the university centre in setting a strategic framework for research which encourages business school involvement should be further explored.

Fourthly, and moving to theoretical questions, we have already suggested possible theoretical perspectives to inform future work. Attempts to construct typologies of business schools’ research strategies may place limits around highly institutionalized explanations of a homogenous field and bring in concepts of path dependence, contextual influences, strategic groups (e.g. a grouping of research intensive higher education institutions) and even strategic choice.

Our literature review suggested future work should examine the business school as a knowledge-based organization. Various models and concepts may be helpful here. The heuristic of receptive and non-receptive contexts for strategic change developed in UK health care should be explored and adapted (Pettigrew et al 1992). The concepts of absorptive capacity and of knowledge sourcing routines may also be helpful. We suggested that the higher level science policy

literature could be applied to research dynamics within the business school sector and that it would be a novel contribution to bring two traditionally separate literatures together.

Fifthly, various relatively standard social science based methods should be employed to progress this research agenda. There appear to be few, if any, existing data sets so primary work will be needed. Methods should include large scale and email based descriptive surveys of populations of business schools looking at reported external research collaborations and their correlates (where it will be challenging to achieve good response rates and the number of responses needed for statistical power). In addition, case studies undertaken at various levels across the business school field will be important. There are various levels at which case study work could take place, relating to the different theoretical positions reviewed earlier:

- *At business school field level:* business school field wide institutions such as AACSB, ABS, AoM, BAM, EURAM, and EFMD represent arenas in which business school research strategies may be discussed and shaped. Do they practically engage in such conversations? How (if at all) do these institutions relate to core government policies on research and innovation, STEM subjects, and the research councils? Do they relate to learned societies in other academic disciplines? To what extent do these business school sector wide bodies influence individual schools? Is there strong isomorphism across the field in terms of the content of and importance placed on research strategy at individual school level?
- *At university level:* the central steering core of the university is likely to seek to shape the research strategies of the individual department, including the business school, in a direction desired by national actors who are responsible for government policies on

national competitiveness and R&D in higher education. It is possible that management reforms have strengthened the position of the university centre against traditionally autonomous departments (Paradeise et al 2009). The creation of multi-disciplinary institutes covering broad thematic areas would be one possible approach. What are the financial, institutional levers and other incentives/penalties that the central university adopts? How much influence does such central steering have in shaping business school behaviour?

- *At business school level:* The individual business school can be seen as a knowledge producing organization. What is its research strategy (behaved as well as declared) and does it value academic collaborations with other university departments? What are the mechanisms and incentives through which any such strategy is promoted? What influence does such strategy have on the behaviours of key faculty?
- *At individual level:* if business schools remain highly professionalized organizations, then these higher levels may have relatively little influence on individual academics, especially those with some seniority and scope for choice. Is there a ‘bottom’ up push for external research collaborations coming from a subset of academics? If so, what are their motivations, influence channels and characteristics? How do they relate to ‘top down’ research strategies and can the two reinforce each other?
- *At project level – explaining success:* it would be interesting to take a set of completed ‘high impact’ inter-disciplinary research projects involving business school faculty and produce a retrospective analysis of the factors and causal chain that led to such high impact.

So it will be important to assess the nature and strength of interactions between these levels within multi-level designs since the extent of ‘loose coupling’ (Weick 1976) may still be considerable.

These two core methods could complement each other within a mixed methods approach: the survey instrument should be designed after the initial literature review and exploratory case study work to help generate propositions. Statistical patterns generated by large scale surveys can be explored later in the field in terms of their meaningfulness to business school actors.

The case study work needs to be informed by general methodological discussion about what constitutes high quality case studies and the right balance between internal and external validity, given the weakness of descriptive single case studies (Marinetto 2012). Yin (2009) stresses the advantages of multiple sources of data (interviews, observation and documents), of purposefully selected, large scale, comparative (and we would add longitudinal) designs (e.g., Pettigrew et al 1992) on patterns of strategic change in health care organizations); of replication across cases and a connectedness to explicit theory and its further development.

Such case studies of business school ‘knowledge work’ could be ethnographically-based to including the use of research techniques such as shadowing (see Nicolini et al’s (2010) cognate study of the practices of knowledge mobilization by NHS top managers). Alternatively, they could draw on the strategy-as-practice perspective (Johnson et al 2007) to examine micro practices and artefacts of research collaboration over the cycle of an inter-disciplinary research project, for example the construction of a joint protocol and research bid; the conduct of team meetings during a research project; how is the work divided up and then brought together?; the writing of a multi-disciplinary paper; whether the collaboration endures beyond a single project.

How might the research agenda outlined assist the future institutional development of business schools? It is our first contention that business schools still need to mature as producers of social science and research based knowledge, both to retain legitimacy within the academy and to construct a distinctive niche within a crowded field. The development and exploitation of such academic research capability here becomes a strategic issue for business schools. Reflecting the science policy literature, it is our second contention that a trend within knowledge production towards thematic research involves large teams drawn from various academic disciplines. If so, the ability of business schools and of individual faculty to construct productive multi-disciplinary teams with other academic disciplines represents a strategic 'core competence'. Deans and research directors, as well as to vice-chancellors across the university, should find this very interesting. These important policy issues need to be informed by relevant primary data, both quantitative and qualitative.

We hope our preliminary study and proposed research agenda will trigger more work on these important themes in the future.

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