

Woolgar and Latour's 'Cycle of Scientific Credibility' as a basis for conceptualizing Business School Strategy

Chris Ivory and Helen Shipton

Abstract

Drawing on contemporary and historical discourse around UK business schools and insights from the sociology of scientific knowledge, we argue that business schools should be understood and judged, not as they typically have been, as engines of knowledge production, but as engines of credibility production. Credibility, we argue, is central to the attractiveness of business schools to students and other key stakeholders and therefore credibility, and the mechanisms through which credibility are maintained, should be at the center of strategic thinking within business schools. We argue that over-reliance on funding from corporate sources can have profound consequences for the ability of schools to continue to produce credibility. This article focuses primarily on the experiences of business schools in the UK.

Introduction

In terms of growth, research output and reputation, UK business schools have been one of the great success stories of Higher Education. Although there were no business schools in 1965 there are now 138. One in five of all arts, humanities and social science undergraduates (AHSS) study in business schools, along with around a third of all post-graduates (HEFCE data 2011). Business schools earn around £2 billion annually for the UK economy. Individually, business schools' contribution to their regional economies can range up to around the £100 million mark through spin-outs, improved skills and raised productivity (Cooke and Galt, 2010).

Despite their success, UK business schools find themselves in an increasingly difficult environment (Starkey and Tiratsoo, 2007; PA Consulting, 2013). Schools in the UK are subject to a continuing shortage of qualified staff (Starkey and Tiratsoo, 2007), dwindling income from investments and slackening student demand, both in the UK and in key international markets (UKK, 2013). Competition for students is increasing from newly emerging private schools and credible well-priced international providers (PA Consulting, 2013; Thomas et al. 2013), while at the same time the UK Visas and Immigration Agency is targeting international students as a means to reduce immigration. Students are also demanding more in return for their fees (Thomas, et al., 2013a). National research budget growth has stalled, with an increasing proportion of what remains being re-directed toward Science, Technology, Engineering and Mathematics or 'STEM' subjects (Thorpe and Rawlinson, 2013). All aspects of the UK Universities sector has been subject to pressure to seek cost savings in the context of UK government austerity measures (Diamond Report, 2015; Blackmore, 2016).

Given the structural pressure on schools, Thomas et al. (2013) have even suggested that some business schools may not survive. With no government restrictions on student numbers, there is already potential for more prestigious schools to expand into the traditional market segments of those below them and, indirectly, to close them down. Some commentators have

even suggested that the scene is set for a potential 'race to the bottom' for schools without the genuine capacity to deliver on their present claims to excellence (Thomas, et al. 2013b; Starkey and Lejune, 2014).

Given reduced funding from governmental sources and increased competition in student recruitment, it is timely that this special issue asks what the effects of a growth in dependence on external research funding and, in particular, funding direct from corporates, which is likely to increase, might have on business schools. What we suggest in this article is that through a clearer understanding of precisely how business schools survive and prosper, we can better predict what effects a shift toward more corporate and private funding might have.

Our argument here, drawing on Latour and Woolgar's (1979) concept of the 'cycle of credibility' in scientific knowledge production, is to suggest that business schools must also attend carefully to the cycle of credibility. We argue that over-reliance on a particular source of funding risks degrading the embodied competencies needed to generate that credibility in the future. We argue that this way of thinking about business school strategy offers a clear and unambiguous way of analyzing the likely success of any given strategy – including the decision to focus on a specific form of income.

The article proceeds by outlining the main debates about business school knowledge and teaching that have followed business schools since the 1950s. Commentators have variously criticized business schools for being too close to business, too close to academia, too distant from society and as serving none effectively or indeed, at times, ethically. This is followed by consideration of the similarly extensive commentary on business school strategy. This literature is not entirely immune from questions of where business schools should focus their efforts or which stakeholders they should serve and how, but its main concern is with the prosperity of business schools, rather than their ethics per se. This aspect of the discussion draws on a range of work, but also includes that directly involving the authors conducted for the Advance Institute of Management and reported three AIM reports (Ivory et al. 2005; 2006 and 2007). This research was informed by data gathering exercises involving the deans attending three annual Association of Business Schools Dean's conferences and supplemented by interviews with 15 Deans. In part, this paper is a re-interpretation of the three reports produced for AIM, which do not focus on 'credibility' and of the interview material, which has not been previously drawn upon.

Literature review: what's the problem?

In this section, we draw on commentary from on business schools in the US and the UK. Much of the literature focuses on business education in the US, but many of the criticisms are also applicable in Britain, which in many respects has mirrored an American approach to educating managers (Engwall and Zamagni, 1998; Gourvish and Tiratsoo, 1998; Amdam, 1996; Locke, 1996, 1989). We deal with teaching and research separately.

Teaching in British business schools has been regularly criticized for its lack of relevance to the business community (National Economic Development Office, 1970, 1972; Griffiths and Murray, 1985; Brown et al., 1996). In the UK, business schools, as originally conceived, were never intended to be 'academic' institutions but rather their role was seen by policy makers as being to provide post-graduate management education that would help halt

Britain's industrial decline (Spender, 2000; Bennis and O'Toole, 2005). However, by the 1980s some critics felt that business schools had effectively been 'captured' by universities, that the study of management had been turned into an academic discipline and that the original intention that business education should primarily serve as a means of improving management competence, and by extension British economic performance, was being forgotten (Griffiths and Murray, 1985; Brown et al., 1996).

In the US, concerns around teaching have focused on its lack of academic rigor. Two key US reports, Gordon and Howell (1959) and Pierson (1959) were commissioned to report on business and management teaching. Gordon and Howell (1959), in particular, regarded business schools in the US, as a consequence of their then close proximity to business, as unfocused and second rate – as attracting poor students, non-academic staff and of failing to advance theory. "Production management courses are often the repository of some of the most inappropriate and intellectually stultifying materials to be found in the business curriculum. Not only do many faculty members have little respect for such courses, but students in a number of schools complained" (Gordon and Howell, 1959, p. 190, quoted in Koskela, 2017). Teaching, it was feared, was being left to 'untrained quacks' (Economist, 2009). The primary concern was that US business schools lacked the respect of more established theory-driven fields within academe and that they failed to address broader business and related societal and economic questions in their teaching (Gordon and Howell, 1959). Gordon and Howell favored a move away from practice-focused teaching and an emphasis instead on strategy, ethics, the arts and sciences. Though, as Koskela notes, it is difficult not to see criticisms around what is taught as closely bound up in what it is that academics themselves want to research.

More recently, MBA programs in the UK and US business school's most practice-facing teaching programs, have also come under fire. They have been criticized for failing to instill leadership qualities and to teach only watered-down and uncritical versions of established management theory (Mintzberg, 2004; Mintzberg, Simons and Basu, 2002; Ghoshal, 2005; Parker, 2018). At the same time, there has been considerable discussion about the utility and value of MBAs (Locke, 1996, 1998; Bennis and O'Toole, 2005; Mintzberg, 2004; Mintzberg, Simons and Basu, 2002; Pfeffer and Fong, 2002; Rayment and Smith, 2013) and of the ethical values embodied in MBAs (Goshal, 2005). Alongside claims that MBAs fail to teach knowledge that is of career value to students they have simultaneously been implicated in producing MBA's that have helped drive poor ethical standards in business. In 1991, the Economist carried an article complaining that MBA graduates were "critters with lopsided brains, icy hearts, and shrunken souls" (Economist, 1991, quoted in Locke, 1998). It is interesting to note that Gordon and Howell shared this concern in 1959.

Research conducted within business schools has also been the subject of considerable hand-wringing. On the one hand, it has been argued that much of the research conducted in business schools, while empirically and methodologically rigorous, has little or no direct relevance for practicing managers (Bennis and O'Toole, 2005; Koskela, 2017). Koskela (2017) in particular has expressed concern that business schools have focused on opaque and 'introspective quantitative theory' rather than the concerns of practicing managers (see also Ivory, 2017). On the other hand, concerns have also been expressed that schools have become too close to business and in so doing have given up their critical perspective (Crainer and Dearlove, 1998).

Parker (2018) has echoed these concerns recently, referring scathingly to 'paint by numbers' academic output from UK business schools. His concern reflects a general sense that UK business schools have failed to fully achieve acceptance into academe and that rather than being captured by academe, they have been captured by an obsession with publication metrics. Business schools, it has also been observed, have never developed a consistent rigorous, stable body of knowledge like those in the fields of medicine or engineering (Koskela, 2017; Pfeffer, 1993). Koskela's concern is with the failure to develop a body of a consistent body of knowledge that could serve as a basis for management training, however Pfeffer's concern is more in line with that of Howell and Gordon (1959), the still pressing issue of academic 'prestige' (Pfeffer, 1993). As Pfeffer observes, a lack of a shared theoretic paradigm reduces the prestige and credibility of the knowledge produced by a discipline, which in turn reduces the ability of that discipline to develop the 'political clout' needed to leverage support and funding either internally from their host university, or externally with respect to government and other funding. Such disciplines also struggle to manage their own affairs, he notes, such as setting the criteria for promotion in that field. It should be noted that, political clout aside, other commentators have suggested that business schools themselves are academically healthy and dynamic precisely because they did not develop such a theoretic paradigm, and so remain flexible and eclectic enough to accommodate a range of multiple and even conflicting theoretic positions (e.g. Ivory, 2017). This eclectic and even conflicted teaching environment, he argues, provides a basis for teaching well suited to the complex, variable and emergent nature of the organization landscape in which students will eventually find themselves.

As Ivory et al. (2006) note, while there is little consistency in criticisms toward business schools this should not be surprising given the historical context within which schools emerged. Having said this, it seems paradoxical that the critical literature has accused business schools of being both irrelevant to business and at the same time economically damaging and of being both too academic and yet also too uncritical.

Some of the (conflicting) themes are presented in Table 1.

Table 1: Conflicting themes in the debate about business schools

| Claim | Counter-claim |
|--|--|
| Business school research is too abstract and irrelevant to the needs of practicing managers. | Not enough business school research is grounded in the methodological rigor of the social sciences, it is often too case based and discursive. |
| Business school teaching is too theoretical, and not sufficiently focused on problems that managers actually face. | Business school teaching is too 'customer focused' and not sufficiently distant from, and critical of, management practice. |

| | |
|--|--|
| MBAs, and business degrees generally, do not produce well rounded managers with leadership qualities. | MBAs are, or for a long time were, seen as a passport to career progression and greater earning power. |
| Business education has made almost no impression on practicing managers, and has failed to impact business performance. | Business schools are partly culpable for recent corporate scandals, and therefore have had a negative impact on business performance. |
| There are too many business schools. Many of those taking degrees in management are unlikely to get much benefit from their studies. | There are not enough business schools. UK firms simply cannot rely on the University sector to supply the training / education that their managers need. |

Reproduced from Ivory et al. (2006).

Business schools in UK have been the subject of controversy and the uneasy relationship between business research and the academy has been an ongoing concern (Tiratsoo, 1998b; Thomas et al., 2013; Thomas, and Wilson, 2013). The creation of the first schools was in many respects an uneasy compromise, which, as even their proponents recognized, had serious weaknesses (Tiratsoo, 1998a, 1998b; Brown et al., 1996; Griffiths and Murray, 1985). What we can take from these criticisms, however, is a more general point. That business schools comprise a complex set of relations, tensions and vulnerabilities. Concerns with academic respectability (both for the school and the individual academic) are in tension with concerns about the application of knowledge to practice. The challenge for schools is to offer teaching and research that carries prestige (measured in academic rigor) and yet also offer teaching and research that is practice-oriented. Critically these tensions, as we will go on to suggest, can quickly threaten the stability and viability of a business school if not carefully managed.

Business school strategy.

Another more recent stream of commentary in the literature has been less concerned with which stakeholders that business schools are, or should, be serving and far more with pressing strategic issues for business schools. There has been much commentary from consultancies, industry commentators and sector bodies as to what constitutes good business school strategy (e.g. Cooke and Gault, 2010; Thomas et al. 2013; PA Consulting, 2013; Lorange, 2013; Ivory et al., 2006, 2007, 2008). An industry has grown up around offering business school's strategic advice and has highlighted such strategic directions for business schools as clear differentiation, stronger customer-focus, better business engagement and demonstrable economic impact. There have been increasing calls for business schools to differentiate themselves by specializing in particular market segments (Lorange, 2013 and PA Consulting, 2013) and to focus on branding (Davies, 2012).

One key strategic requirement of all business schools, according to Goodall (2009), is the ability to attract and retain the right staff. As Goodall (2009) stresses, quoting one Dean from her study of successful international business schools: "Everything in a university flows from the academic value of faculty. My priority was to ensure that [the school] attracted and

retained the best academics". Blackmore (2016) notes Vice Chancellors in the UK sharing the same concern and that efficiency drives have threatened the retention of key academics. Our research with AIM found similar concerns across the spectrum of provision in the UK in our interviews with Deans. Deans recognized that good staff (by which they meant primarily those with strong research capabilities) underpinned both research and teaching quality. One Dean, of a top ranked UK school argued that: 'it is because you are a good researcher that you become a good teacher'. This view was commonly expressed, and it was clear that Deans of prestigious schools were, above all, looking to recruit academic researchers. 'I look for people who have an identity as a researcher' one told us, 'this leads to confidence in crossing boundaries.' Deans of the top ranked schools also reflected on how they could maintain their positions within elite US and European business school recruitment networks, while Deans of the schools just below them in the rankings planned how they might break into those networks. Further down the rankings, amongst business schools keen to be research-focused, but perhaps less so, Deans sought to protect 'research stars' from excessive teaching-loads by building capability around islands of demonstrable excellence and bemoaned the loss of staff to more prestigious or better paying regional competitors. This was not true for all schools and those measuring less well in research rankings, we found, may well decide that research was not a route they were able to take. As one dean put it: "we have a strong teaching and learning agenda which drives what is expected of the staff...we also research, but that is one line in the recruitment criteria".

As regards differentiation, research by the Advanced Institute of Management (Ivory et al. 2006) also identified the following strategic choices facing schools: the type of research focus (supporting local firms or tackling big social science questions); the reputation the school wanted to develop (e.g. as regionally or internationally influential or as teaching or research-led); the teaching focus (from business experienced MBAs to inexperienced undergraduates; the volume of teaching undertaken; the sort of margin they hope to extract from teaching; and their function as an institution in terms generating national prestige or widening participation.

Business schools can also be differentiated by the style of 'knowledge' which they generate and disseminate (Starkey and Francis, 2005). Building on this work, Ivory et al. (2006, 2007) identified four strategic knowledge-based categories of school: social science driven schools, liberal arts schools, professional schools and knowledge economy schools. These categories were based on modes of knowledge production and teaching/research focus in accordance with the degree to which schools tend toward one form of knowledge output or another (Ivory et al. 2006). The social science model is defined by its contribution to academic social science knowledge and debate. The principle stakeholders for this type of activity would be other academics in business schools and other university constituencies. Excellence can be measured by the UK's Research Excellence Framework and tends to indicate research-intensive schools. Teaching is across the range from undergraduates to postgraduates but a high entry-tariff is typical. The liberal arts model orients towards the fundamentals of knowledge, self-knowledge, wisdom, leadership and art and to the practice and application of these factors in both teaching and research. These schools tend to be more 'critical' in their approach to knowledge and business and are also highly research-intensive. Recent history in the UK suggests these schools are under considerable pressure, from their own leadership, to move away from this focus (Parker, 2018). The third model, the professional school, focuses on the improvement of management practice and the training of a professional management cadre. It conceives of a business school as akin to schools of medicine, dentistry and law (Bennis and O'Toole 2005) and reflects a focus on skills development and case-study learning. Schools in this mold tend to focus on low-volume, high-value postgraduates. They

are teaching-focused, but are also most typically highly-research intensive. The final model of activity for business schools is that of close connectivity with the knowledge economy. These schools have an engagement focus and seek to develop knowledge with commercial 'value' in conjunction with other, often regional, organizations. These schools tend to be non-research intensive and focus on under-graduate teaching. Many of these latter schools have emerged, in the UK, from regional polytechnics.

Business schools in the UK, it should be noted, also face a battery of government and independent measures that help potential customers assess the 'quality' of the institution. The Research Excellence Framework (REF), the Teaching Excellence Framework (TEF), student employment figures, published staff-student ratios, levels and sources of research income (which are publically available) and the National Student Survey all feed into ranked lists, such as the Financial Times world-ranking and the Guardian Universities list. Rankings are an unavoidable 'fact of life' for business schools (Gioia and Corely, 2002) but they are also, Gioia and Corely concede, a good "...surrogate index sound-bite of programme quality" (p. 108). Though as Parker's (2018) observations imply, these metrics also seem to be enforcing a strategic drift away from both business and academe and toward a more mindless 'following the numbers' strategy that serves neither.

Discussion - business schools and the cycle of credibility

Taken together, the need to find a knowledge space with which it is possible to excel, the need to retain appropriate if not excellent staff, the need to maintain levels of income (not least to service the increasing estate costs besetting all UK Universities as they vie for students (see also Parker 2018 on this subject) and the need to do well in the various national and international 'rankings', poses considerable strategic challenges to business schools. The story of Manchester Business School (MBS) is perhaps revealing in this regard, at least with respect to how quickly things can go wrong. The founding of the London and Manchester business schools in the 1960s was envisaged as a partnership between the universities and business. The new schools built at the time were modelled, to a considerable extent, on the US system with an emphasis on postgraduate MBA degrees taught using case study methods. From its inception, MBS had remained committed to the principle that half its income should be derived from business sources (primarily the provision of post-experience courses for practicing managers). In order to maintain this balance, and to avert a looming financial crisis in the 1970s, MBS focused resources on developing what they called Joint Development Activity (JDA) courses, in which academics and managers from a particular company worked together on specific business problems. The courses proved popular with business clients, and became an important source of revenue for the school. They were time consuming for the staff involved, however, and while JDAs helped MBS improve its financial position, in doing so levels of research funding were significantly reduced and numbers of research assistants slashed. By 1983 concerns about the academic credibility of the work being conducted at MBS was under question and this led to the removal of its director and his successors set about implementing a strategy to refocus attention on academic research (Wilson, 1992, 1996). The great success of MBS today stands testament to that strategy.

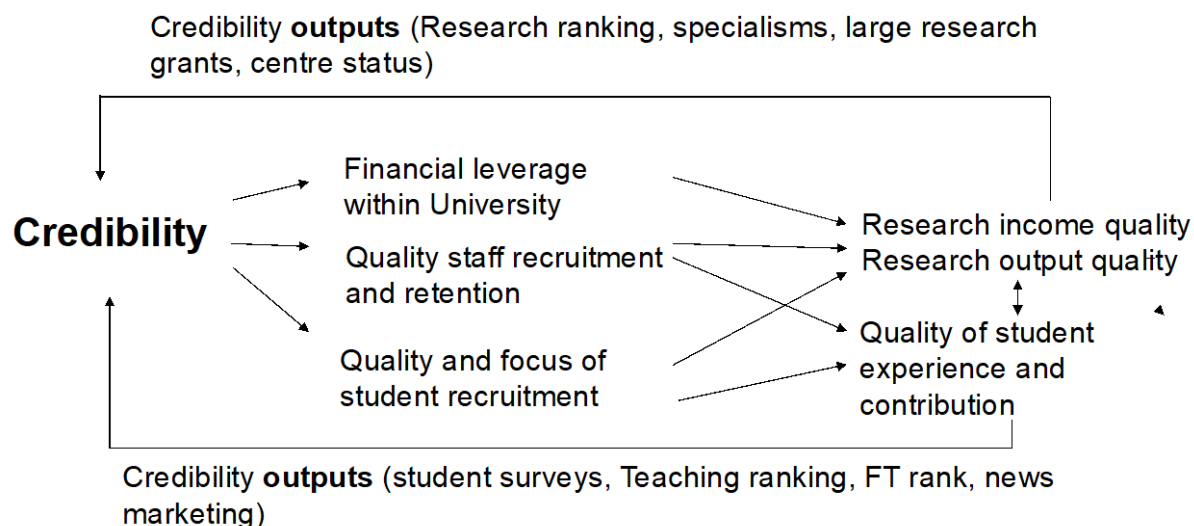
Choosing, strategically, to go down a knowledge-economy route, supporting local business and seeking non-academic funding for doing so, is consequently tantamount to a slow suicide. It is a paradox that potential MBAs, while seeking a practice-facing education, will pay higher fees to attend an institution that has demonstrable academic prestige, but that is

how the market works. Brand is a complex and under theorized issue for business schools. Arguably, business schools can be thought of as what Tether and Hipp (2000) have referred to as knowledge-intensive service providers. That is, they offer both professional, tailored knowledge-services (research, MBA teaching contracts) sometimes alongside mass-customized services (e.g. in most cases, undergraduate and post-graduate education). However, because the value of knowledge-based services is hard for clients to determine in advance 'trust' must precede any exchange (Roberts et al., 2000). It is for this reason that perceived brand is critical to the sale of knowledge-intensive services like education and indeed, research. For MBA's, the best way to judge the likely quality of the service (or at least the value of the certification associated with it) is by via the credible and universal measures of prestige used by others to judge it, primarily, in the UK, the REF rankings. Consequently, the main driver of perceived brand quality in the UK, and a proxy measure of the quality of all of its services, is academic output.

It follows, and without losing sight of the difficulties that MBS ran into, that business schools have a delicate balancing act to perform which involves recruiting and retaining the staff to generate the academic prestige required to retain or improve their position in the rankings while also generating the income needed to maintain the school. As shown earlier, there is presently tremendous pressure on business school income, particularly that from the state. The problem thence, is that there is income, which contributes positively to credibility generation and that which detracts from it. Good income pays for research time and research outputs, bad income turns the members of staff involved into service providers, for which there is limited or no knowledge output. Latour and Woolgar's (1979) concept of scientific knowledge production as part of a 'cycle of credibility' is useful here. They conceive of scientists, not as producing knowledge per se, but as producing personal credibility. As the cycle progresses (see figure 1.) the researcher converts grant money and equipment, through subsequent work, into results, scientific papers and thence credibility. This credibility gives access to further financial inputs and access to such things as equipment and the cycle is able to continue. Established credibility may also lead to a subsequent over-estimation of capability and quality and to attracting resources beyond that would be expected by a more objective assessment of capability or quality (known as the 'Mathew effect', Merton, 1968). Arguably, this effect may also favor some already prestigious business schools.

For business schools, this cycle is occurring at the level of the individual and the level of the institution itself. Individual academics need to generate academic credibility if they are to be promoted and gain standing within their communities. Business schools are themselves in the same cycle, that of converting income (from students, public bodies and private companies) into, not just knowledgeable students of different types and research insights for different stakeholders, but also into the 'credibility' that will ensure access to those inputs also in the future (see figure 1.). as the diagram suggests, credibility allows business schools to lever resources from both its host university and external sources as well as attract the staff and students it sees as contributing to its mission. Capable staff lie at the heart of the ability to generate credibility, not only through creating the right knowledge outputs but also by ensuring access to prestigious and high-value funding.

Figure 1: Business school cycle of credibility



The concept of business schools as primarily engines of credibility generation makes sense of much of the hand-wringing over business schools over the last few decades. Gordon and Howell's (1959) and Pfeffer's (1993) work can be interpreted as sharing the concern that business schools that lacked credibility also lacked power to attract the financial and other inputs needed to assure their prosperity. Calls for business schools to specialize in particular knowledge types (Starkey and Francis, 2005) reflects the same concern, a call for business schools to decide which cycle of credibility they are in, i.e. which particular stakeholders they should be credible to. But as we have suggested, there are great dangers here. Parker's (2018) concerns can be interpreted in the same way, at the root of his anxiety is the concern that business schools, by entreating their staff to 'follow the numbers' and to abandon overly academic concerns with the liberal arts, are squandering their credibility.

The cycle of credibility, if this model is correct, also makes sense of the remarkable stability at the top and bottom of the University rankings that can be easily observed in UK league tables. Based on the cycle of credibility, one might argue that the position at the top is stabilized through a self-reinforcing virtuous cycle of reputation, income, access to good students and access to high-quality staff. In a sense, good staff are themselves an input into the business school's credibility cycle. Entrapment at the lower end of occurs by precisely the opposite means – an inability to attract or retain capable research-focused staff. As Bourdieu (1979) observed, it is easier to succeed in the distinction game, when you start it with a strong hand. Life at the lower end of the rankings is also not a matter simply of operating in a different student market, it also means vulnerability, as we have noted, to any expansion of the Universities possessed of more credibility – which translates into attractiveness to students.

MBS provides one example of how over emphasizing a source of funding which does not contribute to the cycle of credibility can quickly de-stabilize an institution. Credibility and the ability to attract non-business funding, good undergraduates, PhDs, funding from government and so forth are tightly coupled. Institutes that ignore this link do so at great risk. Not only is their credibility at risk but the engine which generates it, academic staff, will soon look elsewhere if they feel too much of their time is spent on teaching on executive courses and managing consultancy programs that do not have scope for producing academic outputs. As Scarborough (1998) has pointed out, the idea that 'human resource' can simply be re-purposed at will to meet strategic ends, is unrealistic, they will resist. MBS cut across the focus of academics on personal credibility production and in return they ousted their director.

So, what does a strong school look-like in the context of this model? The AIM research pointed to a familiar pattern in the top-ranked schools in the UK. These schools tended to reduce their reliance on undergraduate income and to focus on high-value MBA teaching. However, while they branded themselves as business and solutions-oriented, staff themselves, we found, were nevertheless also publishing on highly-regarded and sometimes academically esoteric social science journals; the high-fees paid by MBAs buying them the 'headroom' to do so. These schools also worked hard to ensure a flow of government-funded research to pay for researchers and associated professors. Consequently, while being outwardly oriented toward business, primarily as a means of ensuring a flow of high-fee paying MBA students, they also ensured that they nurtured their credibility-generating machinery very carefully.

It follows that the question of whether more funding from private sources is likely to have impact on the knowledge produced by business schools is perhaps not quite the right question. The question is really about how that funding does or does not interfere with the 'credibility generating' machinery that, in the long term, underpins the overall competitiveness of the school. Operating from a position of existing academic reputational strength allows relationships to be built with business funders that do not interfere with this machinery unduly. Where academic credibility is also low, as perhaps as it was for MBS at the time, then the relationship can be more problematic – draining time and resource away from the task of producing credibility and threatening the stability of the school. The great success of Manchester today, no doubt, was in breaking away from the close embrace of business, building their academic credibility and then using that credibility, and the other resources which that gives it access to, to manage such relationships from a position of strength. Those commentators that bemoan the failure of business schools, even those more regionally focused, to engage with business, do not take proper account of the need to generate credibility.

Conclusion

This article has suggested a model of business schools based on Latour and Woolgar's (1979) cycle of credibility in science. In so doing we have re-thought business schools as engines of credibility rather than engines of knowledge production. By framing business schools as knowledge-intensive businesses, dependent upon the ability to generate credibility, we can side-step the question as to whether business schools are academic enough, or practice-facing enough and ask instead whether business schools produce sufficient credibility to continue to

attract the inputs they need (be that from students, governments or business) to prosper. The answer to this question, for the present at least, seems to be that they do. Business schools have been one of the most successful segments the UK's higher-education sector. However, the continued ability of business schools to achieve this success remains vulnerable. Deans and related governing bodies perform a delicate balancing act between maintaining the income they need now and maintaining the 'machinery' which produces credibility and any income that does not support credibility production should be treated with caution, if not suspicion.

References

Amdam, RP, ed. (1996) *Management Education and Competitiveness: Europe, Japan and the United States*. Routledge, London and New York.

Anthony, PD (1986) *The Foundation of Management*, Tavistock, London.

Bennis, W and O'Toole J (2005) How business schools lost their way. *Harvard Business Review* May: 99-104.

Blackmore P (2016) *The role of prestige in UK universities: Vice Chancellor's perspectives*, Leadership Foundation for Higher Education: London.

Brown RB, McCartney, S and Clowes J (1996) "Do they mean business? An investigation of the purpose of the 'new university' business schools in Britain". In R. P. Amdam (ed.) *Management Education and Competitiveness: Europe, Japan and the United States*, Routledge, London and New York.

Bourdieu P. (1979) *Distinction: A social critique of the judgement of taste*. Harvard University Press, Massachusetts.

Casadesus-Masanell R and Ricart J (2010) From strategy to business models and on to tactics. *Long Range Planning* 43(2-3): 195-215.

Chesbrough H and Rosenbloom RS (2002) The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change* 11: 529-555.

Cooke A and Galt V (2010) *The Impact of UK Business Schools*:
<http://www.associationofbusinessschools.org/sites/default/files/BS%20Impact%20Study%202010.pdf>

Crainer S and Dearlove D (1998) *Gravy Training: Inside the World's Top Business Schools*. Capstone, Oxford.

Davies J (2012) UK Business Schools: High impact, inventive and industrious in *Business Schools Seizing the Future*. Association of Business Schools:
http://www.associationofbusinessschools.org/sites/default/files/120824_abs_policybooklet_web.pdf

Diamond I (2015) *Efficiency, effectiveness and value for money*. London: Universities UK.
<http://www.universitiesuk.ac.uk/highereducation/Documents/2015/EfficiencyEffectivenessValueForMoney.pdf>

Doganova L and Eyquem-Renault M (2009) What do business models do? Innovation devices in technology entrepreneurship. *Research Policy* 38: 1559-1570.

Economist (2009) The more things change...A seminal critique of American business education, five decades on. <http://www.economist.com/node/12762453>: Accessed April 5th 2017.

Engwall L and Zamagni V eds. (1998) *Management Education in Historical Perspective*. Manchester University Press, Manchester.

Ghoshal S (2005) Bad management theories are destroying good management practices. *Academy of Management Learning and Education* 4(1): 75-81.

Gibbons M, Limoges C, Nowotny H, Schwartzman N, Scott, P and Trow, M (1994) *The new production of knowledge: the dynamics of science and research in contemporary societies*. London: Sage.

Gioia D and Corely K (2002) Being Good Versus Looking Good; Business School Rankings and the Circean Transformation: From Substance to Image. *Academy of Management Learning and Education* 1(1):107-120.

Goodall A (2009) Highly cited leaders and the performance of research Universities. *Research Policy* 38(7): 1079-1092.

Gordon RA and Howell JE (1959) *Higher education for business*. New York, NY: Columbia University Press.

Gourvish T and Tiratsoo N eds. (1998) *Missionaries and Managers: American Influences on European management education, 1945-60*. Manchester University Press, Manchester.

Griffiths B and Murray H (1985) *Whose Business? An analysis of the failure of British business schools and a radical proposal for their privitisation*. Institute of Economic Affairs, London.

Itami H and Nishino K (2010) Killing two birds with one stone: profit for now and learning for the future. *Long Range Planning* 43: 364-369.

Ivory C, Miskell P, Shipton, H, White A, Moeslein K and Neely A (2006) *UK Business Schools: Historical Contexts and Future Scenarios*. AIM Executive Briefing, Advanced Institute of Management Executive.

Ivory C, Miskell P, Shipton H, White A. and Neely A (2007) *Future of UK Business School's Faculty: Retention, Recruitment and Development*. AIM Executive Briefing, Advanced Institute of Management.

Ivory C, Miskell P, Shipton H, White A. and Neely A (2008) *Leadership of Business Schools: Perceptions, Priorities and Predicaments*. AIM Executive Briefing, Advanced Institute of Management.

Ivory C (2017) The prospects for a production management body of knowledge in business schools: Response to Koskela (2017) 'Why is management research irrelevant?'. *Construction Management and Economics*, 35(7): 385-391.

Koskela L (2017) Why is management research irrelevant? *Construction Management and Economics* 35(1-2): 4-23.

Latour, B and Woolgar, S (1979) *Laboratory life: The construction of scientific facts*, Princeton University Press, Princeton.

Leavitt, H J (1989) Educating Our MBAs: On Teaching What We Haven't Taught. *California Management Review* 31(3):38-50.

Locke R (1996) *The Collapse of American Management Mystique*. Oxford, Oxford University Press.

Locke R (1998) Mistaking a historical phenomenon for a functional one: postwar management education reconsidered. In Engwall L and Zamagni V *Management Education in Historical Perspective*. Manchester: Manchester University Press.

Lorange P (2005) Strategy means choice: also for today's business school. *Journal of Management Development* 24(9): 783-790.

Lorange P (2013) Business school culture: customer-focused, virtual and cooperative. *Education and Training* 55(4/5): 336-347.

Merton R (1968) The Matthew Effect in Science. *Science* 159(3810): 56-63

Mintzberg H, Simons R and Basu K (2002) Beyond selfishness. *MIT Sloan Management Review* 44 (1): 67-74.

Mintzberg H (2004) *Managers not MBAs: A hard look at the soft practice of managing and management development*. San Francisco, CA: Berrett-Koehler.

National Economic Development Office (1970) *Management Education in the 1970s: Growth and Issues*. HMSO, London.

National Economic Development Office (1972) *The Training of British Managers: A Study of Need and Demand*. HMSO, London.

Parker M (2018) Why we should bulldoze the business school. *The Guardian*, 27th April.

PA Consulting (2010) *Universities through the looking-glass: Re-inventing the business of higher education*. <http://www.paconsulting.com/our-thinking/re-inventing-the-business-of-universities/>

Pfeffer J and Fong C (2002) The end of business schools? Less success than meets the eye. *Academy of Management Learning & Education* 1(1): 78-95.

Pfeffer J (1993) Barriers to the Advance of Organizational Science: Paradigm Development as a Dependent Variable. *Academy of Management Review* 18: 599-620

Pierson FC (1959) *The education of American businessmen*. New York, NY: John Wiley.

Rayment R and Smith J (2013) The current and future role of business schools. *Education and Training* 55(4/5): 478-494.

Roberts J, Miles I, Hull R, Howells J and Anderson B (2000) Introducing the new service economy. In Anderson B, Howells J, Hull R, Miles I and Roberts J (eds.) *Knowledge and Innovation in the New Service Economy*. Cheltenham: Elga.

Scarbrough H (1998) Path (ological) dependency? Core competencies from an organizational perspective. *British Journal of Management* 9(3): 219-232

Shafer SM, Smith, HJ and Linder JC (2005) The power of business models, *Business Horizons* 48:199–207

Starkey K and Lejeune C (2014) *Back down to earth? Business school leadership in a time of disruption*. Association of Business Schools
[<http://www.associationofbusinessschools.org/content/back-down-earth-business-school-leadership-time-disruption>].

Starkey K and Francis (2005) Presentation given at the Management Research Forum. Jointly convened by the Economic and Social Research Council's (ESRC) Evolution of Business Knowledge (EBK) Programme with the Advanced Institute of Management. Warwick: Warwick University.

Starkey K and Tiratsoo N (2007) *The business school and the bottom line*, Cambridge: Cambridge University Press.

Tether B and Hipp C (2000) Competition and innovation amongst knowledge-intensive and other service firms: evidence from Germany. In Anderson B, Howells J, Hull R, Miles, I. and Roberts, J. (eds) *Knowledge and Innovation in the New Service Economy*, Cheltenham: Elgar.

Teece D (2010) Business models, business strategy and innovation. *Long Range Planning* 43:172 -194.

Thomas H, Thomas, L and Wilson, A (2013a) *Promises fulfilled and unfulfilled in management education: reflections on the role, impact and future of management education*. EFMD Perspectives, Emerald Group Publishing.

Thomas, H, Lorange P and Jagdish S (2013b) *The business school in the twenty-first century: Emergent challenges and new business models*. Cambridge: Cambridge University Press.

Thomas H, Lee M and Wilson A (2014) Future scenarios for management education. *Journal of Management Development* 33(5): 503-519.

Thomas H and Wilson A (2013) Physics envy: cognitive legitimacy or practical relevance: Dilemmas in the evolution of management research in the UK. *British Journal of Management* 22(3): 443-456

Thorpe R and Rawlinson R (2013) *The role of UK business schools in driving innovation and growth in the domestic economy*, the Association of Business Schools task force: http://www.associationofbusinessschools.org/sites/default/files/130516_absinnovation_web.pdf

Tiratsoo N (1998a) 'What you need is a Harvard.' The American influence on British management education. In T Gourvish and N Tiratsoo (eds.) *Missionaries and Managers: American Influences on European management education, 1945-60*. Manchester University Press, Manchester.

Tiratsoo N (1998b) Management education in post-war Britain. In L Engwall and V Zamagni (eds.) *Management Education in Historical Perspective*. Manchester University Press, Manchester.

Tiratsoo N, Edwards R and Wilson J (2003) Shaping the Content of Business Education in Great Britain, 1945-1990: Production Engineers, Accountants and Shifting Definitions of Relevance. In R Amdam, R Kvålshaugen and E Larsen (eds.) *Inside the Business Schools: The Content of European Business Education*. Abstrakt forlag, Oslo.

Universities UK (2013) *The funding environment for universities: an assessment*: <http://www.universitiesuk.ac.uk/highereducation/Documents/2013/FundingEnvironmentForUniversities.pdf>

van Aken, JE (2004) Management Research Based on the Paradigm of the Design Sciences: The Quest for Field-Tested and Grounded Technological Rules, *Journal of Management Studies* 41(2): 219-246.

Wilson JF (1992) *The Manchester Experiment: A History of Manchester Business School, 1965-1990*. Paul Chapman, London.

Wilson JF (1996) Management Education in Britain: A compromise between culture and necessity. In R. P. Amdam, ed., *Management Education and Competitiveness: Europe, Japan and the United States*, Routledge, London and New York.

Zott C, Amit R and Massa L (2011) The business model: recent developments and future research. *Journal of Management*. 37: 1019–1042.