When working on a recent book, charting *The Impact of the Social Sciences*, my co-authors Simon Bastow and Jane Tinkler and I talked with dozens of corporate executives, scientists and academics about business-university linkages in the UK. In those conversations we found that many people on both sides of the fence tended to not see or minimize linkages at first. But the longer we talked, the more common ground and interactions would often be turned up.

So it's helpful at the outset of *LSE Business Review* to look at the top ten ways in which businesses and universities are now linked, and to consider which of these are open to and potentially fruitful for the social sciences.

(a) With **episodic contracting** a firm encounters a problem where research could be helpful, does a quick search and ‘spot’ contracts with a university department for help urgently to solve that issue. The department undertakes a piece of ad hoc applied research or consultancy to meet the commission.

(b) **Strategic commissioning** goes one stage further because the firm plans its research or consultancy needs in advance, undertaking a more considered search, and committing somewhat more resources over a longer term (perhaps two or three years). Pursuing a mix of in-house research and outsourcing helps firms to balance their R&D portfolios, spread the associated risks of doing research in-house, and access innovation and new knowledge from outside.

(c) **Continuous partnership** exists where the firm has a close and long-term relationship with researchers, providing a regular stream of funding that can translate into discrete projects, studentships and new equipment, and getting to know the department’s or lab’s staff and research capabilities in detail. The researchers also come to understand the firm’s procedures, priorities and capabilities in detail, and perhaps establish trust relations with particular executives (understanding the firm’s ‘politics’ more).

(d) When a **university licenses research** then the department or lab controls a valuable resource (such as a patented or otherwise protected piece of intellectual property) created by previous research, which the firm pays to be able to use.

(e) **Technology transfer** involves government funding agencies who provide resources to the university side (such as state-of-the-art capital equipment or funding for post-doctoral researchers) on condition that the department or lab then collaborates with industrial partners, so as to transfer knowledge of new techniques or subjects to relevant companies (Klingstrom, 1986; Bower, 1992).

(f) An **upward development spiral** is something of a Holy Grail of technological development at regional scales. Here government supports university innovations that feed into industrial development (usually to firms located in
the same region or city), in the expectation that employment and tax revenues will increase, with positive multiplier effects.

(g) **An organized tech start-up** from the university viewpoint involves a department or lab developing research with potential commercial application. The university then does a deal with a venture capital firm, which may involve either private finance or in time an Initial Public Offering (IPO), so as to create a spin-out or 'starburst' company.

(h) A **start-up via exit** is much more of a blow to the university side. Here a researcher who spots an industrial opportunity leaves the department or lab and negotiates individually with a venture capital firm to create the start-up company, presumably not using any IPR protected materials from their university employment. All dividends or equity gains flow back to the founder and investors here, with no formal return to the university unless the founder makes later donations.

(i) **Specific marketing collaboration** occurs where a firm funds high quality research for charitable or corporate social responsibility reasons. But firms may well expect that there will be specific marketing opportunities created by the research to bring its executives into conversation with potential clients, to demonstrate corporate social purpose in ways that attract custom, and to enhance the firm’s brand or reputation for foresightedness, acumen or competence in the field that the research relates to.

(j) In more **general marketing and corporate social responsibility** the incentives for firms are far more diffused, simply incrementally building a brand with elite or general audiences that associate the firm with attractive or socially worthwhile research – which may lie a long way from its industry sector, much as if the company was supporting a symphony orchestra, an art exhibition, a medical charity, or an effort to alleviate world poverty.
How the social sciences stand with business

Given these ten key patterns of interaction, how are the social sciences placed in collaborating with business? We might especially want to compare them here science and tech disciplines, which have focused on collaboration far longer and far more purposefully? We found big differences in patterns of linkages across these two big discipline groups. Clearly the social sciences have much still to do, and one of the key aims of LSE Business Review is to help speed that catching-up process. The good news for collaboration though is that in key sectors (like the IT industry, banking and retail) business executives are increasingly aware of the potential importance of evidence-based management, and of the role of social science research in underpinning that in the digital era.

Table 1: Comparing the business linkages found across STEM and social science departments

<table>
<thead>
<tr>
<th>Type of linkage</th>
<th>STEM departments and labs</th>
<th>Social science departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common</td>
<td>Strategic commissioning, Continuous partnership, University licensed research, Technology transfer, Tech start-ups, Exit start ups (with some equity for the university), Specific marketing, Marketing, Corporate social responsibility</td>
<td>Episodic contracting, General marketing</td>
</tr>
<tr>
<td>Sometimes found</td>
<td>Episodic contracting (with small and medium enterprises)</td>
<td>Strategic commissioning, Specific marketing, Exit start-ups (with no equity for the university)</td>
</tr>
<tr>
<td>Rarely found</td>
<td>Upward development spiral</td>
<td>Continuous partnership, Technology transfer, Tech start-ups</td>
</tr>
<tr>
<td>Almost never found</td>
<td>—</td>
<td>University licensed research, Upward development spiral</td>
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</tbody>
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Patrick Dunleavy is the General Editor of LSE Business Review. Patrick is Professor of Political Science and Public Policy in the Government Department at LSE, where he has worked since 1979. He teaches mainly on LSE’s Executive MPA and MPA programmes and is chair of LSE Public Policy Group (PPG). Patrick is also Centenary Research Professor at the Institute for Governance and Policy Analysis, University of Canberra. He studied PPE at Corpus Christi College, Oxford, and then took his D.Phil at Nuffield College, Oxford, where he was also Research Fellow. Patrick has lead many PPG research projects funded by and working with major corporations, including the future of digital government for EDS and HP Enterprise Systems, governance reform for ICANN, and consultancy and MPA capstone projects with major consultancy firms. PPG also works closely with government agencies including recently the European Court of Auditors, and the Higher Education Funding Council for England (HEFCE). Patrick is a Fellow of the Academy of the Social Sciences, and has received two impact awards from the UK Political Studies Association (in 2003 and 2013). He is a board member of the Campaign for the Social Sciences. His two most recent books (co-authored) are The Impact of the Social Sciences (Sage, 2014) and Growing the Productivity of Government Services (Elgar, 2013). He tweets at @PJDunleavy and @Write4Research.

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