

# Varieties of academic capitalism and entrepreneurial universities

## On past research and three thought experiments

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**Abstract** This article begins with a brief review of research on the development of ideas about the knowledge-based economy (analysed here as ‘economic imaginaries’) and their influence on how social forces within and beyond the academy have attempted to reorganize higher education and research in response to real and perceived challenges and crises in the capitalist order since the mid-1970s. This provides the historical context for three ‘thought experiments’ about other aspects of the development of academic capitalism. The first involves a *reductio ad absurdum* argument about different potential steps in the economization, marketization and financialization of education and research and is illustrated from recent changes in higher education. The second maps actual strategies of the entrepreneurial university and their role in shaping academic capitalism. The third speculates on possible forms of ‘political’ academic capitalism and their changing places in the interstices of the other trends posited in these thought experiments. The article ends with suggestions for a research agenda that goes beyond thought experiments to substantive empirical investigations.

**Keywords** Academic capitalism · Competition · Entrepreneurial university · Financialization · Varieties of capitalism · Thought experiment

In his once highly acclaimed book, *The Coming of Post-Industrial Society* (Bell 1973), Daniel Bell predicted that (1) knowledge would replace capital as the critical factor of production as societies moved to post-industrialism, (2) intellectual technologies for planning the public good would displace mechanical technologies used to boost private profit, and (3) universities would supersede industrial enterprises as the dominant kind of social organization. The first prediction is reflected in late modern societal self-descriptions such as ‘information society’, ‘learning society’ or ‘knowledge society’ (UNESCO 2005; Souter 2010). But there has also

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been a shift in primacy from industrial to financial capital as well as a growing financialization of most social relations (van der Zwan 2014). The second prediction has been controverted by use of intellectual technologies to promote the *economization* and *financialization* of social life rather than to identify and advance the *public good*. And prediction 3 is challenged by the uneven trend for universities to act more like rival enterprises that seek to maximize their reputation and revenues than as disinterested, public-spirited institutions.

Bell's predictions provide the initial frame for my critical reflections on academic capitalism. I begin with a brief review of past work on how higher education and research have adapted to changes in contemporary capitalism and how this adaptation is mediated through the hegemony of discourses around the 'knowledge-based economy' as opposed to the knowledge society. This economic and social imaginary, which is strongly endorsed by various state agencies and not just a reflection of economic processes occurring in the background, is guiding the structural reform and strategic reorientation of higher education and research (hereafter HER). It thereby contributes performatively to the emergence of an already posited, but still incomplete, transition towards knowledge-based economies. This review involves a thin account of academic capitalism because it focuses on the structural coupling and co-evolution of the increasingly dense ties between the academy and capitalism. Attention then turns to thicker accounts that provide theoretical frameworks for assessing whether and how far higher education and research are being directly reorganized on capitalist or entrepreneurial principles. These accounts rest on three 'thought experiments' that speculate on past and future developments in these fields and are based on conceptual reflection as well as extrapolation of theoretically framed historical trends. As such, they do not offer a meta-analysis of past research or present new empirical results. Instead, they suggest new lines of primary or secondary inquiry about academic capitalism (on thought experiments, see Sorensen 1992). The first experiment relies on *reductio ad absurdum* arguments intended to identify some real limits to a fully developed academic capitalism. It suggests several analytically distinct steps on the path to a profit-oriented, market-mediated form of academic capitalism and shows that progress down this path is far from complete. Experiment 2 reflects on five current forms of academic entrepreneurship and how far innovation is being reoriented from substantive academic purposes towards commercial, capitalist or even financialized ends. The third experiment reflects on the ways in which higher education and research could profit literally as well as metaphorically from forms of political rather than market-rational pursuit of profit. Some brief concluding remarks suggest how to take these arguments beyond what are currently essentially efforts at plausibilization.

## Performing the knowledge-based economy

Social imaginaries are crucial in simplifying complex natural and social worlds as a basis for 'going on' and, perhaps, transforming and stabilizing social relations (on imaginaries, see Sum and Jessop 2013). Here, I focus on visions of the knowledge-based economy (KBE) and their transformative influence in higher education and research.<sup>1</sup> At the centre of this imaginary is the production, valorization and application of knowledge as a key driver of the economic efficiency, competitiveness, profitability or effectiveness of the private, public and third

<sup>1</sup> For analytical purposes, while education certifies knowledge and skills, research produces and validates knowledge. These tasks may be performed in more or less distinct systems and organizations.

economic sectors, of good governance and of an enhanced quality of life. This vision was heavily promoted in the 1990s by, among other agents, the Organization of Economic Cooperation and Development (OECD 1996). It arose as a late response to the crisis of post-war Atlantic Fordism, which rested on a virtuous transatlantic circle of mass production and mass consumption (Jessop 2002). And its resonance was reinforced by growing global economic integration, which intensified pressures to move beyond Fordist growth dynamics. One side effect of these changes was proliferating critiques of education from many quarters for failing to meet the human capital needs of an allegedly ever more competitive, globalizing KBE (see Carter and O'Neill 1995).

The KBE imaginary has powerful effects on capital accumulation and other social arrangements (for a survey of the relevant lexicon, see Carlaw et al. 2006; on its genealogy, Godin 2006; Jessop 2008; and on knowledge society and knowledge economy discourses in higher education, Peters 2004; Välimaa and Hoffman 2008). While the KBE is a novel concept, it was prefigured in earlier changes in education and science as economic relations were rationalized (Weber 1968, 130–63) and created demand for diverse forms of knowledge as major inputs into accumulation, whether through the intellectual commons or via intellectual property rights (hereafter IPRs). This helped to reorient university teaching and research from alleged ivory-towered intellectual isolation towards closer and more continuous contact with the economy, the state and wider community as co-producers and consumers of useful knowledge (e.g. Etzkowitz 1994). These trends were already evident in university-corporate ties in US private universities from the eighteenth century onwards. But they were intensified in the 1990s as the KBE was regarded as crucial in defending US technological and industrial competitiveness and promoting the interests of newer knowledge-intensive and creative 'industries'. One aspect of this shift was changes in federal funding for research, enabling universities to keep and licence the intellectual property rights in their discoveries and inventions. Similar developments occurred elsewhere, partly coordinated through international agencies such as the OECD, partly arising independently in response to the same competitive pressures and the relative hegemony of the KBE imaginary as a way of making sense of disruptive technologies and economic crises. In the post-Fordist era, this is reflected in expectations that universities get engaged with technology transfer, build science and technology research parks, host incubators, enable commercial spin-offs and spin-outs, provide consultancy services and so forth (Slaughter and Leslie 1997; Horta 2009). This trend is clearest in science, technology, engineering, mathematics (STEM) subjects but has penetrated the social sciences and even the arts and humanities when deemed relevant to competitiveness (notably in the creative, cultural and copyright industries), government agendas or social control. It is nonetheless unevenly developed, and while many are called to join in, fewer can respond effectively. A related trend is intensified global competition for talent—including undergraduates and masters' students, doctoral and post-doctoral researchers, skilled knowledge workers, members of the 'creative class' and high-flying and effective entrepreneurs.

These developments occurred unevenly at many scales from cities through regional and national economic spaces to quasi-continental and supranational spaces. A good example is the European Union's Lisbon Agenda to make Europe the most competitive KBE in the world (European Council 2000; on the role of the Anglo-American model in this regard, see Slaughter and Cantwell 2012, 583). This reflected a general European consensus that '[g]iven that they are situated at the crossroads of research, education and innovation universities in many respects hold the key to the knowledge economy and society' (Commission of the European Communities 2003). Besides its emulation of the US model and response to growing

competition from East Asian developmental states, which were shifting from investment- to innovation-led catch-up strategies, the Lisbon agenda also reflected traditional features of local Rhenish capitalism (on the latter, see Albert 1993).

This suggests that HE is increasingly construed as a directly economic factor to be governed in conjunction with similar factors to boost economic competitiveness. Whether, against recent global trends, public universities remain firmly embedded in the public sector or, in line with these trends, are integrated into the private sector or, at least, forced to compete with private players, the HER sector was increasingly judged from the 1990s onwards in terms of its economic efficiency and contributions to national systems of innovation, the learning economy, the KBE and ‘enterprise culture’, economic competitiveness and growth at pertinent scales (Etzkowitz 1994; Godin 2006; Olssen and Peters 2005). This has influenced state funding strategies and mechanisms and the ways in which universities are evaluated and supported. For similar reasons, efforts are now made to boost business influence in curriculum design and to adapt education and research to perceived economic needs by developing private-public partnerships (Levidow 2001).

Two apparently contrary but mutually complementary strategies were adopted. The first reaffirms ‘the state functions of education as a “public good”, while the second subjects education to the disciplines of the market and the methods and values of business and redefines it as a competitive private good’ (Marginson 1999, 122). The second strategy reflects the hegemony of KBE imaginaries and strategies, its supporters’ growing role in shaping education mission statements (to the detriment of concerns with citizenship, equity, social inclusion, social investment and nation building), the growing financial dependence of HE on third-party revenues, including contract research, domestic and international tuition fees, consultancy, intellectual property revenue streams, fund-raising and endowment income and third mission activities (Clark 1998; Etzkowitz 2002; Slaughter and Leslie 1997). Overall, these strategies boost research universities at the KBE frontier and even produce ‘winner takes all’ dynamics with strong polarizing effects. But the diversion of resources into research creates pressures in many universities to reduce the teaching costs. This can benefit local or regional institutions that specialize in cost-effective mass credentialization and opportunities for life-long learning. It also guides efforts to deregulate higher education to allow low-cost private sector entrants into the academic market place.

This has important consequences for university governance. This is seen in changes in internal management organization and capabilities, the introduction of internal markets and quasi-markets, quality assurance mechanisms, differentiated career tracks and new intermediary bodies for managing and transferring knowledge internally and with external partnerships (Slaughter and Cantwell 2012). Reflecting this reorientation towards serving the KBE, universities have adopted the latest management fads for increasing efficiency, such as New Public Management principles, enterprise resource planning, business process re-engineering, total financial management, customer relations management (for students), data mining and the sale of data to outside commercial interests (Eaton et al. 2013). In addition, employers and practitioners are getting more involved in curriculum development, managers of private enterprise are drawn into educational governance and agenda setting, accountants and financial managers acquire more influence over strategic formulation, and mobility is fostered between the academy and non-academic worlds. Thus, the traditional model of university governance, depicted most famously (if sometimes more in rhetoric than practice) in the Humboldtian community of scholars and students, is being challenged by demands for greater accountability to a multi-tiered state system, to diverse business interests ranging from small- and medium-

sized firms to national and international champions and, more generally, to the treadmill demands of competitiveness over many scales and around an ever-expanding range of economic and extra-economic factors (Slaughter and Cantwell 2012). This holds even for world-class universities, which gain some autonomy from national pressures only to face them globally.

## Experiment 1: rethinking the rise of academic capitalism

This thought experiment uses a *reductio ad absurdum* strategy to challenge the ‘economistic fallacy’ in analyses of academic capitalism. For Polanyi (1982), the economistic fallacy leads observers to describe all economies in terms of categories that are, in fact, unique to the (capitalist) market economy. This *epistemic* fallacy is distinct from the economically reductionist *ontological* error that explains all social change via the changing economic imperatives and/or effects of economic class struggle. Here, I challenge the economistic fallacy by distinguishing six stages on the path to a developed capitalist market economy and then a finance-dominated economic and social order. It applies this framework to possible steps in the development of academic capitalism. Both steps in this thought experiment are historically grounded but remain essentially conceptual. No claim is made that these stages follow each other in a smooth, unilinear sequence that unfolds across all spheres of society until it is eventually completed. On the contrary, each stage requires much effort by interested social forces to extend market principles despite resistance, frictions, conflicts and crisis tendencies. Some steps may never occur; others may be reversed. An important preliminary conclusion from this analysis is that a full traversal of all stages has not yet occurred in the HER fields and is unlikely to occur. Moreover, to avoid the charge of economic reductionism, the social forces promoting or resisting these changes are not restricted to social classes, however defined, but include many other agents with quite varied identities, interests, values and goals.

### From commercialization to financialization

1. An *exchange economy* develops when useful goods and services are circulated through direct barter, debt relations or use of a medium of exchange. Exchange replaces other modes of economic organization, such as largely self-sufficient house holding, reciprocity among complementary economic units and politically organized redistribution (Polanyi 1982). This step does not require the primacy of exchange relations, let alone of money, in these arrangements. Indeed, historically, markets existed mainly at the interface of households, reciprocal networks and redistributive communities (Marx 1963; Weber 1968; Polanyi 1982).
2. A *commercial economy* develops when commodification and monetization become basic features of economic organization and goods and services are explicitly produced for sale and exchanged for money. This occurs so far as material provisioning takes the form of commodity production and/or as economic agents seek to derive monetary revenues from material provisioning or immaterial activities that previously circulated outside monetary circuits. Merchant capital plays a key role in the development of this stage across space-time.
3. A rational *market economy* involves rational organization of production based on formal bookkeeping principles, free trade in commodities and profit-oriented trade in money and

- credit instruments (Weber 1968, 2009). Rational organization of production along (quasi-)corporate lines can be tied to non-competitive principles (e.g. monastic production, military efficiency, research laboratories or social enterprises), but it is now closely linked with profit seeking in competitive markets.
4. A *capitalist economy* develops when the commodity form is generalized to all four core inputs into production: land, labour power, money and knowledge (cf. Marx 1963; Polanyi 1957, Noble 2002). These are best interpreted in the first instance, albeit on different grounds in each case, as *fictitious commodities*. That is, while they are bought and sold and may enter as inputs into a capitalist production process, they are not themselves produced for sale in the same kind of process (for important qualifications to this claim, see Jessop 2007). Yet their circulation in the commodity form has fundamental effects on the nature and dynamic of the production of material and immaterial goods and services.
  5. A *competitive financialized economy* develops when production, distribution and exchange are closely articulated with, even subordinated to, the circuits of capitalist credit money. This intensifies competition by (i) enhancing the equalization of profit rates across the entire market economy as finance capital *qua* functioning capital is reallocated among competing profit-generating investments and (ii) promoting the equalization of interest rates and rents as finance capital *qua* property, i.e. fictitious capital, is re-allocated among asset classes (e.g. government bonds, asset-based securities, gold, fine art or, indeed, student loan portfolios).
  6. A full-fledged *finance-dominated capitalist economy* emerges with continuing movement towards world *market completion*, with the use of ever more rarefied forms of fictitious capital (including, notably, derivatives) and with increasing use of debt leverage in the search for superprofits. This reinforces the dominance of finance capital *qua* property rather than as functioning capital and works to universalize competition for gain and to intensify capital's inherent contradictions.

While transitions between stages 3 and 4 are often associated, at least among the first movers in capitalist development, with *liberal* imaginaries and practices, *neoliberal* ones are significant in economization strategies from stage 4 onwards. In general terms, neoliberalism emphasizes the virtues of liberalization, deregulation and privatization; privileges (capitalist) market competition as a principle of economic organization even more than liberal imaginaries and practices; and promotes the fictitious commodification of land, labour power, money and knowledge and their integration into profit-maximizing accumulation. Neoliberalism also demands to transfer state activities into a commercial, market or capitalist economy where these are deemed to lie outside the state's core functions, to organize these through internal markets inside the state or to use various market proxies to simulate competition (see Jessop 2002). In addition, in periods of austerity, attempts to maintain marginal or unprofitable, but substantively beneficial education and research activities, are undermined by budget cuts, demand for regular 'efficiency gains' and call for fiscal consolidation. These aspects help to explain why neoliberalization may drive or assist shifts to the fifth and sixth stages. Yet these changes also generate such powerful tensions and crisis tendencies in capitalist market economies that, as Karl Polanyi (1957) noted, 'society' eventually fights back against their environmentally and socially destructive effects.

## Economization in higher education and research

I now consider whether these general stages can plausibly be said to occur in higher education and research. If so, these would eventually be reoriented towards rationally organized competitive knowledge production for profit (stage 4) and, in further moves, integrated into finance-led or finance-dominated accumulation (stages 5 and 6). Higher education and research typically traverse these steps, to the extent that they do, in an economy already dominated by capitalist market relations. This creates scope for overlap or fusion between the stages 2 to 4 as already established business practices are applied for the first time in higher education and research. These two fields nonetheless have specific features that impede the full traversal of all six steps.

One obstacle is that, as Claus Offe (1975) noted, whereas capitalist enterprises typically have a clear formal maximand easily measured in monetary terms (profits), governments and other public bodies have several, often vague and inconsistent, sometimes contradictory substantive goals that are contested and hard to quantify, sometimes deliberately so. Education and research generally belong to the second group (on the ambivalent goals of universities, see Weiler 2005; on confused government aims for education, see Brown and Carrasso 2013). Only if HER institutions were fully privatized and integrated into a financialized market economy (with securitization of their assets and revenues), would profitability and shareholder value override all other goals.

Another obstacle is a potential contradiction in the production, circulation and valuation of knowledge seen as intellectual commons or as intellectual property (Jessop 2007). This creates conflicts around (1) the traditional commitments to free circulation of ideas, innovative products and practices and (2) the commodification or commoditization of knowledge and its deployment for private profit to the neglect of unpriced, but real, positive externalities. This is a fractal problem that occurs at many scales of the HER complex and can create multiple conflicts of interest in various knowledge-intensive, design-intensive or creative fields. This led Marginson (2013) to claim that capitalist markets cannot be fully established in higher education (see also Hemsley-Brown 2011). Recent OECD discourses on universities reflect these tensions, switching uneasily between their role in providing public goods or private benefit for students and other stakeholders (Hunter 2013, Komljenović 2016).

The starting point for judging whether the stages of economization and, eventually, financialization apply to education and research is the proportion of society's time devoted to these activities as sources of general or specific *want-satisfying* goods and services. In this context, stage 1 begins when more of society's time is devoted to supplying education and research without an explicit, defined quid pro quo, whether in kind or cash. Such provision could occur in households, reciprocal communities and redistributive networks (Polanyi 1982). The classic case in universities is communities of students and scholars organized on collegial, commercially disinterested principles, whether pre-modern or Humboldtian in spirit and practice.

The second stage involves commercialization as education and research are explicitly *produced* to be sold. Once capitalist markets have emerged in the wider economy, this stage often overlaps with that of rationalization. The main forms are fee-paying universities, whether for profit or not, and commercial research. Secondary examples include private tuition and distance learning (on distance learning and the commodification of knowledge, see Noble 2010). As stage 2 is consolidated, students become sought-after customers, knowledge and creativity are commodified, and later, as research findings are commodified, IPRs gain scope

and duration and thereby increase in value to universities and research institutions. One index of this stage is the adoption of commercial criteria in decision-making, efforts to increase revenues, a focus on cost reduction and cost recovery and financial risk management. Where this occurs, it encourages a shift from collegiality in university governance towards key roles for finance professionals, outsourcing and consultancy. These pressures are reinforced when government funding is also contingent on the same or similar performance targets. Indeed, states often play a key role in commercialization as part of their fisco-financial strategies as well as for ideological reasons.

Stage 3 involves the development of a capitalist market economy in education and research. Indices of this would be free trade in knowledge, a rational organization of production based on double-entry bookkeeping or other measures to ensure efficiency and control and recover costs, and the raising of necessary capital costs not only from savings or revenues but also from commercial and financial markets. Some HER systems have long had private universities, often to a significant degree, that operate on these lines (for a broadly similar analysis of stages 1 to 3, see Marginson 2013). Otherwise, this stage begins the transformation of universities and research into private profit-maximizing enterprises or, at least, non-profit private, public or hybrid organizations that seek to maximize net revenues, especially where the state is no longer the primary source of funds (on three types of corporate university, see Waks 2002, and on the construction of higher education as an industry to be governed in these terms, see Komljenović 2016). One aspect of this is greater investment in revenue-generating operations such as medical centres, sporting facilities, student accommodation and the conference trade at the expense of core education functions (e.g. Eaton et al. 2013). As we shall see, this also boosts creditworthiness.

Stage 4 would involve the *quasi-commodification of mental labour* as an input, including the *separation of intellectual labour from the means of intellectual production* (especially in STEM subjects with capital-intensive production), the loss of professional status, attempts to limit freedom of teaching and research, an increased hierarchization and precarization of intellectual labour, the formalization, codification and embodiment of knowledge in smart machines and expert systems, including digitization of lectures and teaching materials enabling their virtually costless reproduction and circulation for the producer, even if consumers must pay fees (Agasisti and Catalano 2006). This reinforces the subordination of mental labour to commercial considerations in ways analogous to the role of machinofacture in subordinating manual labour to capitalist control (Bell 1973, 29). The real subsumption of intellectual labour under capitalist control is an essential step towards a competitive market economy. The first steps began when the bourgeoisie converted ‘the physician, the lawyer, the priest, the poet, the man of science, into its paid wage-labourers’ (Marx and Engels 1976, 487). Under neoliberal globalization, with its ideological supports in the neoliberal theory of property rights and the legal principle of creative ‘work for hire’ (which transfers rights in intellectual property to the employer or, for students, to their educator), this is also linked to commodification of teaching materials, scholarship, scientific research and scientific publications. Three other aspects are, first, the enclosure of the intellectual commons created within the public education and research systems; second, the subordination of knowledge production to IPR regimes (Bollier 2002, Perelman 2002); and third, commercial and capitalist colonization of new scientific domains, especially in STEM subjects. These forms of privatization and marketization contribute to the erosion of any residual public interest in education provision, research and scholarship (Frow 1996; Brown and Carrasso 2013).



Related to these last three broad stages, we see a growing global industry of standardization, accreditation, quality assurance and benchmarking of higher education and research institutions (Hazelkorn 2015). There are many specific rankings for universities (notably, the *Shanghai Jiao Tong University Academic Ranking of World Universities*, *The Times Higher Education Supplement World University Rankings*, *QS World University Rankings* produced by Quacquarelli Symonds Ltd. and *US News and World Report Global University Rankings*). Annual revisions institutionalize a continuous gaze through a ‘paper panopticon’ (Sum 2009) with performative effects that far exceed their robustness and face validity. They drive an accelerating treadmill of competitiveness that creates pressures to follow best practice and adopt the latest strategic recipes based on the most recent, or still fashionable, economic imaginaries.

The next two stages concern the penetration of finance capital and financial speculation into higher education and research. These stages are less often discussed in work on academic capitalism because they concern in the first instance their articulation to financial capital rather than productive capital and seem far removed from the discourses of the knowledge-based economy, the competitiveness agenda and so forth. They can nonetheless have significant effects, when taken to an advanced stage, on HER aims, activities and governance.

Stage 5 develops as *money as functioning capital* engages in profitable investment activities in these fields and, likewise, as HER-related finance becomes a distinct ‘asset class’ for *capital as property*. This reflects demand and supply side incentives. Thus, universities and research institutes must look beyond public sources of capital and income and compete over the quality of their estate; conversely, financialization leads to the supply of new asset classes that diversify risk for wealthy individuals, family trusts and financial institutions. The convergence of these trends is facilitated insofar as external credit ratings of education and research institutions influence their ability to raise loans and issue bonds, make public offerings of shares, attract investment capital through private placements and private equity, collateralize general revenue streams and otherwise boost their total debt-raising capability. The interaction of these trends strengthens market forces and subjects HER enterprises individually and collectively to the tendency to equalize profits (revenues) and risk-discounted interest rates within this sector and in relation to returns on other asset classes.

Sixth, a finance-dominated education and research system could emerge as the knowledge economy is subordinated to external demands for the profitability of ‘capital as property’ (securitization) that emanate from outside the HE and research sector. Examples include the development of a global secondary market in Student Loan Asset-Based Securities (SLABS), which are extensively used in the USA<sup>2</sup> and Chile and will also develop in the UK when the student loan portfolio is collateralized in 2017. As student enrolment and tuition fees have grown and the employability and income gaps between graduate and non-graduate incomes have risen, the SLABS market has become increasingly attractive as an asset class (Sallie Mae 2013; Fried and Breheny 2005). As a source of securitized assets, the volume of student loans in the USA now exceeds the volumes of auto loans, credit card receivables and home equity (excluding first mortgage) loans. Another significant asset class is university bonds with fixed or adjustable rates for new or refurbished teaching and accommodation, research facilities, equipment, medical centres, etc.<sup>3</sup> Such bond issues are driven in part by competition for

<sup>2</sup> The Student Loan Marketing Association (Sallie Mae) pioneered SLABS in 1992 and remains the key market player in the USA. Chile introduced a student loans scheme in 2006 and now has an advanced secondary market.

<sup>3</sup> The Association of Directors of University Estates reports that current capital expenditure on enhancing UK campuses equates to more than the average annual Crossrail budget’ (a big infrastructure budget to connect rail lines in London). The sector’s £27bn turnover in 2013 would put it fourth in the FTSE 100 (Coman 2014).

students based on top-class teaching and learning facilities, quality accommodation and well-equipped sports and leisure facilities. Public university bonds in the USA are tax-privileged and tax-exempt security loans, and synthetic leases have also been developed for private non-profit universities (Pylypczak-Wasylyszyn 2015). Likewise, special investment vehicles to fund student accommodation in public and private universities and the private rental sector are promoted as secure (and securitized) investments. Such developments contribute to the rise of education as a distinct asset class with two kinds of private investment opportunity:

[F]irst, via full material privatisation where the private investor fully owns and operates the education institution with the possibility of service provision via accreditation by public authorities. ... Second, via functional privatization where the public sector seeks private investors/partners to build new or to upgrade existing education facilities, such as schools (Weber et al. 2016, 254).

These trends are not limited to neoliberal economies. For example, Engelen et al. (2014) show how Dutch universities are now big consumers of investment banking products, including interest rate swaps, derivatives, risk management consultancy and cash flow management, and also speculate financially as ‘sophisticated investors’.

A little-remarked aspect of financialization outside specialist circles is that credit ratings partly depend on the scope for HE institutions to cut costs as well as increase revenues. This creates pressure to close small loss-making units regardless of reputation and reinforces the shift from a tenure system to casual, short-term or other forms of precarious employment (Eaton et al. 2013, Moody’s Investment Services 2011, 8). Other criteria that boost credit ratings include diversified income streams, high tuition fees (and the ability to hike them further), a high proportion of foreign students, stable or rising research and foundation income and the financial expertise of university management and its advisers (Moody’s Investment Services 2011).

## Experiment 2: rethinking entrepreneurial universities

This thought experiment is less speculative than the first because it provides a map of current entrepreneurial activities rather than positing a sequence of increasingly implausible stages towards an ‘absurd’, and not yet realized, academic capitalism that is fully integrated into finance-dominated accumulation. Accordingly, this experiment applies a Schumpeterian perspective on entrepreneurship to universities as organizations (for a review of the incoherence of earlier work on entrepreneurial universities, see Sam and van der Sijde 2014). Entrepreneurial universities have become a major research theme, reflecting the rise of KBE discourse; the priorities of neoliberal discourse and practices in post-Fordist economies; and trends towards commercialization, capitalization and financialization in higher education (on entrepreneurial universities in the twenty-first century, see Deem 2001 and Thorp and Buckstein 2010; on types of enterprise university, Marginson and Considine 2000; and for the lexicon of such institutions, Fairclough 1993; Mautner 2005). Nonetheless, the potential contribution of Joseph Schumpeter, an evolutionary economist, to the study of entrepreneurial universities is little remarked.

Schumpeter identified five areas of innovation: (1) introduction of a new good or a new quality of a good; (2) introduction of a new method of production or a new way of commercially handling a commodity; (3) the opening of new markets for one’s own products; (4) securing a new source of supply of raw materials or half-finished goods; and (5)

reorganization of an industry, e.g. the creation of a new cartel or monopoly position or the breaking of existing cartels or monopolies (Schumpeter 1934, 129–35). In the short term, he observed that successful innovation allows monopoly profits. In a well-functioning market, however, these are competed away as other firms adopt these innovations or counter them with other innovations. This maintains the treadmill of competition. There are interesting parallels and treadmill effects in higher education (cf. Jessop 2016).

Schumpeter did not restrict his account to the economic field but extended it throughout the social world (see especially Schumpeter 2002). This is reflected in the widespread literal or metaphorical use of entrepreneurship to discuss activities in extra-economic fields. By analogy, one should not restrict the conceptual scope of academic entrepreneurialism to the economic or financial fields. Indeed, historically, freedom of teaching and research offered many opportunities for innovation and entrepreneurialism that were not motivated primarily, if at all, by profit maximization. Entrepreneurial universities have a longer history than academic capitalism, but their significance for commercial and economic competitiveness develops as higher education and research are disembedded from religious, political and other orders. An interesting question, then, is whether academic entrepreneurialism is increasingly oriented to profit maximization, satisfying the demands of credit-rating agencies, or otherwise constrained by capitalist market criteria or remains open and wide ranging.

Drawing on Schumpeter's analysis, entrepreneurial HE institutions may

1. Provide new preparatory courses; extend degree programmes and introduce new or enhanced programmes in HE, professional training and research that reflects new disciplines, new economic and political priorities or major shifts in cutting-edge and complementary technologies for new waves of economic and social growth.
2. Introduce new methods of teaching and research, copy 'best practices' from other HER institutions or private business, reorganize departments as 'profit centres', exploit new or enhanced information and communication technology infrastructures and 'infostructures', seek to cut costs and boost efficiency by standardizing learning and commoditizing education, find new ways to deliver their 'products', such as offering online rather than correspondence courses for part time, continuing and distance learning or providing English-medium teaching.
3. Open new markets—for example—by validating degrees awarded by other institutions at home or abroad or engaging in the internationalization of education. This occurs by diversifying the source of students (Wildavsky 2010), opening international branch campuses (whether alone, through twinning, partnerships, consortia and franchising or other commercial ties), introducing courses with 1 or 2 years spent in the home country and 2 in the host country or creating new kinds of regional education hubs in Asia (Knight and Morshidi 2011).
4. (a) Secure a new source of supply of raw materials or half-finished goods—analogies could include widening the recruitment base for students of all ages, scouring the globe in the competition for talent (sourcing post-graduate and post-doctoral researchers from abroad, mobilizing international diasporas to return home on high salaries, introducing peripatetic or 'flying faculty' or recruiting world-class or international faculty, signing international cooperation agreements with top global universities). This may be linked to the rise of private sector firms or agencies that recruit students for a fee or organize 'trade fairs' for universities to recruit students and find partners (Komljenović 2016). Conversely and possibly in complementary ways, universities may resort to adjunct, flexible or casual

- intellectual labour to reduce costs and increase flexibility in the face of changing demand or shocks to the financial viability of courses, programmes, faculty or entire institution. (b) Find new funding sources besides the public purse or student fees—including business and third sector research contracts, third mission activities, patents and royalties, ancillary activities (e.g. sports centres, medical facilities), real estate development, private-public partnerships, wealthy donors, the shifting of endowments from safe to riskier, preferably hedged, alternative investments and alumni programmes (increasingly tied to data mining and sophisticated marketing). In addition, at the macro level, states may open the education and research sector to private enterprise and foreign direct investment (cf. Ball 2007)
5. Reorganize the ‘education industry’ and scientific research by investing heavily in creating ‘world-class’ universities that can challenge existing educational and research hierarchies in the interests of boosting the competitiveness of national KBEs and develop new circuits of knowledge that move away from peer review and professional judgement as arbiters of excellence (Slaughter and Cantwell 2012). One effect of this is the marginalization of regional universities where they cannot offer specific local benefits.

The overall result of the first four kinds of innovation is an ‘academic capitalism’ based on ‘intrapreneurialism’ (internal profit centres and franchises) as well as externally oriented entrepreneurialism that generates reputation and profits (Slaughter and Leslie 1997; Slaughter and Rhoades 2004). This need not be limited to commercial entrepreneurship but can extend to social entrepreneurship oriented to social problems rather than private profits. The fifth kind of innovation can also be related to the shifting horizons of catch-up competitiveness, whether at a local, regional, national or supranational level (Jessop 2016) and to efforts to engage in innovation-led development and expand the scope and size of the HER ‘market’.

### Experiment 3: rethinking varieties of academic capitalism

I now conduct an ideal-typical *Gedankenexperiment* inspired by Max Weber’s classification of orientations to commercial gain. The initial review and the two preceding thought experiments examined capitalism and entrepreneurship in higher education and research in conventional terms. This section is more heterodox in approach. Much of Weber’s early work focused on traditional commercial or mercantile capitalism. He then examined two kinds of ‘rational’ capitalism, oriented respectively to trade in free markets and the rational organization of capitalist production and identified various factors conducive to their maximum formal rationality. Rational capitalism is easily related to stages 2 to 5 of economization, namely, commercialization, marketization, capitalization and financialization. However, Weber also identified three internally heterogeneous kinds of political capitalism that rely heavily on extra-economic factors and actors. These involve, respectively, the use of force and domination, predatory activities and unusual deals with political authority (see Table 1). These can be related to the rise of finance-dominated accumulation. For, rather than being the product of spontaneous market forces, this financial regime depends heavily on such political factors (Jessop 2014; cf. Polanyi 1957, on the political planning behind economic liberalism). Accordingly, I now ask whether these political forms might occupy specific niches within a broader ecology of academic capitalism and entrepreneurial universities that is otherwise dominated by rational capitalism(s).

**Table 1** Weber’s typology of orientations to gain and its relevance to academic capitalism

Type	Source of gains	Link to economization	Examples from higher education and research
Traditional commercial and mercantile capitalism	Trade and trade finance in traditional markets	Exchange economy, commercialization	<ul style="list-style-type: none"> <li>• Branch campuses, internationalization activities</li> <li>• Agencies for student recruitment and marketing universities</li> </ul>
Rational capitalism I	Continuous trade in non-traditional markets and continuous production in capitalist enterprises with formal accounting	Marketization, capitalization	<ul style="list-style-type: none"> <li>• For-profit private universities, corporate universities</li> <li>• Rational organization of research laboratories</li> <li>• Real subsumption of academic labour</li> <li>• Casualization of academic labour</li> </ul>
Rational capitalism II	Speculation in financial markets and products, financing new enterprises, controlling finance to gain market or political power	Financialization	<ul style="list-style-type: none"> <li>• Secondary activities undertaken to boost general revenue</li> <li>• Education or research loans and bonds, notably general revenue bonds that maximize debt bearing capacity</li> <li>• Securitization of student rents, loans, etc.</li> <li>• Role of private credit rating agencies in disciplining colleges and universities in terms of business and financial risks</li> </ul>
Political capitalism I	Funding revolutions, wars and party leaders for share in economic spoils Predation more generally	Commercialization Capitalization Financialization	<ul style="list-style-type: none"> <li>• Exploitation through false prospectuses, fake diplomas</li> <li>• Extortion through petty or grand corruption</li> <li>• Predatory publishing based on monopoly power</li> <li>• Corporate ghost writing of academic articles</li> </ul>
Political capitalism II	Business activity based on continuous use of force or domination or exploitation of public authority	Commercialization Capitalization Financialization	<ul style="list-style-type: none"> <li>• IMF conditionalities that affect education and research</li> <li>• Privatization of the intellectual commons</li> <li>• Imposition of <i>acquis communautaire</i> in education and research as condition of EU membership</li> </ul>
Political capitalism III	Unusual deals with political authorities	Monetization and capitalization of political networks	<ul style="list-style-type: none"> <li>• Private finance initiatives</li> <li>• Trade and investment treaties</li> <li>• Revolving doors between state and private sector</li> </ul>

Source: column 1, Swedberg 1998; column 2, Weber 1968 and Weber 2009; and columns 3–4, own research

First, there are predatory forms of academic capitalism based on false prospectuses; usurious student loans; overcharging; petty or systemic corruption; and cheating by students, teachers, administrators and researchers, enabling perpetrators to gain undeserved reputation or income at the expense of those who are honest (Washburn 2005; Nichols and Berliner 2007; Temple and Petrov 2004; Weidman and Enkhjargal 2008). False prospectuses are especially significant in the private further and higher education sector and, in attracting students, may generate further profits from student loans. Trump ‘University’ is a recent and now notorious example in the USA (Cassidy 2016). A more significant example is Education Management Corporation, once the second-largest<sup>4</sup> American for-profit education provider, which, following many complaints and successful prosecutions by state attorneys, was sued, fined and eventually delisted from NASDAQ in 2015. A different kind of predatory academic capitalism is seen in the expansion of ‘degree mills’, which sell fake diplomas, degrees and doctorates (Ezell and Bear 2006). More generally, we can observe the ‘gaming’ of performance indicators such as exam results, ‘value added’ in student performance, drop-out rates and competitiveness indicators (e.g. Kuttner 2014).

Another form of predatory capitalism in research that also damages teaching and learning is the rapid expansion since the 1960s of profit-oriented scientific journal publishing that charges authors for processing and publishing their papers to supplement the publisher’s income from subscriptions, downloads and copyright licences. This is related to the growing concentration of commercial publishing houses, which enhances their ability to exploit both the ‘publish or perish’ imperative of career-oriented scholars (and their current or future university employers) and the need of scientists to access the latest scientific output (Broad 1981; Association of Research Libraries 1998; Bauerlein et al. 2010; Herndon 2016). The profitability of journal publishing and the need for authors to publish something somewhere have contributed to an increase in journal numbers, salami-sliced research reports, poor science and unethical editorial practices intended to boost profits (on predatory publishing, see Beall 2015). Moreover, in some fields, such as the pharmaceutical industry, scientific or pseudo-scientific papers are ghost written on behalf of scientists and research institutes to lend credence to commercial products and services. Conversely, private firms or public bodies may fund research but then, demanding prior review or non-disclosure, block or censor publication where results are unwelcome for commercial or political reasons. Another long-standing and often-remarked predatory feature of academic publishing is the exploitation of the unpaid labour of editors and reviewers.

Second, profit from force and domination can be illustrated from the effects of neoliberal conditionalities imposed as a condition of loans to sovereign states. These conditionalities include the introduction or hiking of student fees, the privatization of education, the opening of markets for education and research to foreign suppliers and the introduction of robust IPR regimes (see also the discussion under ‘unusual deals’ in the following). While some of these conditions may be substantively rational, especially when they reduce predatory academic capitalism and boost education and research standards, they also create conditions for profit-oriented education and research, the penetration of foreign providers and the expansion of financial products issued by, or tied to, education and research. The key institution in this regard is, of course, the International Monetary Fund. The World Bank has promoted similar

<sup>4</sup> Laureate Education is the largest for-profit company with a million of students worldwide; the second largest is now Apollo, which also owns subsidiaries around the world, including BPP, which operates four for-profit colleges in the UK.

changes in a less coercive manner from the 1960s in the form, content and governance of education in the belief that investment in education generates better returns than infrastructural investment (World Bank 1999). However, a later report by the World Bank and UNESCO (2000) concedes the limits of market reforms, recognizes market failures and calls for more government steering. This marks, at least rhetorically, a shift away from the neoliberal agenda in education and research.

Third, unusual deals with political authority are seen in the promotion of private finance initiatives in education, the tax privileges associated with targeted and general revenue loans in higher education and the mobilization of personal networks to win state subsidies. However, the most important examples, some now probably abortive, are the secret deals negotiated between capitalist interests and sovereign states around trade in education services. These include measures to promote internationalization, commercialization, market access to foreign providers of a wide range of educational services (including higher education and consultancy on education services), cross-border supply of distance learning courses (including fee-based MOOC provision), student mobility for study abroad, staff mobility (visas to allow staff to teach abroad on a short-term basis on the grounds that they count as ‘business persons’ within the terms of trade treaties), commercial presence (permitting branch campuses abroad) and privatization of education services and research. Other measures are the extension and protection of IPRs (which harm access to teaching, library and research materials) and the imposition of investor-state dispute settlement arrangements that can be initiated by foreign (but not domestic) firms where they claim that state action threatens their commercial interests and/or future profits. These measures have the biggest potential impact where education is not a pure public service but is delivered in part by private suppliers, whether profit-oriented or non-profit. The biggest beneficiary of such trade treaties is reckoned to be US for-profit education providers.

## Conclusions

Following a brief review of the historical context for debates on academic capitalism, this article presented three different kinds of thought experiment that offer new ways of thinking about the past and future development of academic capitalism (and the limits thereto), possible activities of entrepreneurial universities and interstitial political forms of academic capitalism. While some of the trends considered in the first experiment are familiar in mainstream literature, financialization and finance-dominated accumulation and their implications for the orientation and governance of higher education and research are less often remarked. Likewise, while there is a growing literature on entrepreneurial universities, the potential value added in experiment 2 stems from its explicit use of Schumpeter’s interesting typology of innovation. The third experiment was more speculative without involving *reductio ad absurdum* arguments and explored possible political bases and mediations of commercial gain in the education and research fields. Each thought experiment aimed in its own way to suggest new approaches to old questions and, in some cases, to open new lines of investigation.

In addition to research to test the heuristic power of these thought experiments, four other issues are worth exploring. The first is whether different kinds of academic capitalism and their embedding in different varieties of capitalism might interact in an emerging global education and research system to complement or contradict each other. This is a topic explored in the comparative capitalism literature under the rubric of ‘variegated capitalism’ in contrast to the

more conventional ‘varieties of capitalism’ approach (Jessop 2013). Second, research is needed on the growing tension between the public functions of universities, which still depend on maintaining a certain autonomy from economic imperatives, and their direct integration into a profit-oriented, market-mediated economic order in which universities act like commercial or capitalist enterprises and become indistinct from other organizations in the market economy. Third, while there is extensive research on the impact of neoliberalization, this could be fruitfully linked to broader typologies of academic capitalism and entrepreneurship. And, fourth, building on the first thought experiment, one could usefully examine the colonization of HER by interest-bearing capital through financialization and how this affects their activities via the securitization of HER expenditures and revenue streams.

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