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Unlatching a Digital Model to Drive Ecosystem Change in Academic Book Publishing

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Working paper for the EPSRC New Economic Models in the Digital Economy (NEMODE) Network+



About the Big Innovation Centre



The Big Innovation Centre is an initiative of The Work Foundation and Lancaster University. Launched in September 2011, it brings together a range of companies, trusts, universities and public bodies to research and propose practical reforms with the ambition of making the UK a global open innovation hub as part of the urgent task of rebalancing and growing the UK economy, and with the vision of building a world-class innovation and investment ecosystem by 2025. For further details, please visit www.biginnovationcentre.com.

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1. Introduction

Digitisation has revolutionised almost every nook and cranny of the economy, and the book publishing industry has not escaped unscathed. While the way in which books have been authored, edited, published and distributed has evolved over the years, the printed-and-bounded format had long remained the gold standard – until recently that is. With echoes of the recent upheavals in the music industry, book publishers are coming to terms with the disruptive effects of the Internet and e-reader technologies. In addition to the growing popularity of digital formats and e-readers such as Amazon’s Kindle and Barnes & Noble’s Nook, publishers are facing challenges in the form of market uncertainties, high origination costs, vertical and horizontal competition, and various alternatives to formal publishing. Discount pressures from huge and powerful e-tailers such as Amazon have driven both traditional book retailers (e.g., Waterstones, W.H. Smith) and publishers alike into a corner, as they are forced to either slash prices or differentiate themselves in novel ways.

Academic monograph publishing, too, is stuck in a conundrum. Library budgets are increasingly squeezed, while publishers struggle to sell enough copies to at least cover the origination costs. At the same time, the digital bandwagon is fast gaining momentum, as evidenced by the growing popularity of e-books and open access on the Web. These have radically changed the way value can be created, delivered and captured in the industry, and thus carry profound implications for publishers’ value creation strategy.

1.1 The market

The UK publishing industry in 2011 was worth £14.12 billion, of which 22.1% can be attributed to the book publishing sector.¹ This compares to the global book market that was worth US\$117 billion (£73 billion). The UK sector had experienced a steady decline in recent years, from £3.52 billion in 2007 to £3.12 billion in 2011, and is expected to be worth only £2.96 billion by 2016.² Digital sales now represent 7.6% of UK publishers’ total digital and physical book sales, an increase from just 3.6% in 2009 (see Table 1).

¹ The Publishers Association (2012), *PA Statistics Yearbook 2011*, London: The Publishers Association.

² Estimates by Hucker, R. (2012), *Book Publishing: Market Update 2012*, Richmond: Key Note.

Table 1: Invoiced value of UK publisher sales of digital and physical books, 2009–2011 (£ million)

	2009	2010	2011
Digital	114	158	243
Physical	3,053	3,115	2,967

Source: The Publishers Association (2012), *PA Statistics Yearbook 2011*, London: The Publishers Association.

Major global players in book publishing include the likes of Pearson, Reed Elsevier, Thomson Reuters, Wolters Kluwer, Hachette Livre, Grupo Planeta, McGraw-Hill and Random House, each with revenues in excess of US\$2 billion in 2011 (see Table 2).

Table 2: The world's top 20 book publishers by revenues, 2011 (US\$ million)

Rank	Publishing Company (Group or Division)	Parent/owner	2011 revenues
1	Pearson	Pearson	8,411
2	Reed Elsevier	Reed Elsevier Corp.	5,686
3	Thomson Reuters	The Woodbridge Company Ltd.	5,435
4	Wolters Kluwer	Wolters Kluwer	4,360
5	Hachette Livre	Lagardère	2,649
6	Grupo Planeta	Grupo Planeta	2,304
7	McGraw-Hill Education	The McGraw-Hill Companies	2,292
8	Random House	Bertelsmann AG	2,274
9	Holtzbrinck	Verlagsgruppe Georg von Holtzbrinck	1,952
10	Scholastic (corp.)	Scholastic	1,906
11	Cengage Learning	Apax Partners et al.	1,876
12	Wiley	Wiley	1,743
13	De Agostini Editore	Gruppo De Agostini	1,724
14	Shueisha	Hitotsubashi Group	1,714
15	Kodansha	Kodansha	1,551
16	Shogakukan	Hitotsubashi Group	1,444
17	Readers' Digest	RDA Holding Co.	1,438
18	Houghton Mifflin Harcourt	Education Media & Publishing Group Ltd	1,295
19	Springer Science and Business Media	EQT and GIC Investors	1,138
20	HarperCollins	News Corporation	1,100 (est)

Source: "The Global 50: The World's Largest Book Publishers, 2012", *Publishers Weekly*, 25 Jun 2012, available at <http://www.publishersweekly.com/pw/by-topic/industry-news/financial-reporting/article/52677-the-world-s-54-largest-book-publishers-2012.html>, accessed on 29 Oct 2012.

1.2 Academic book publishing

The academic and professional subsector in the UK was valued at £684 million, or 21.9% of the entire book publishing sector, which was a decline of nearly 3% from the previous year and 3.8% from the heights of £711 million in 2009 (see Table 3). As a whole, the publishing industry's decline is expected to continue as digital innovations are changing consumers' preferences, particularly among the younger generations. Over

the past two decades, sales of academic monographs have shrunk by 90%, causing prices to rise dramatically as fewer copies are sold.³ Figures from a more recent period support this claim. For example, although volume sales of academic monographs in the humanities and social sciences declined by 10% between 2006 and 2010, the value of these sales actually increased by 17% over the same period, implying that price per title had increased.⁴

Table 3: UK physical book publishing market by sector, valued at end-purchaser prices, 2007–2011 (£ million)*

	2007	2008	2009	2010	2011
Academic and professional	683	683	711	705	684
Consumer	2,595	2,567	2,470	2,394	2,199
School	241	257	223	231	240
Total	3,519	3,507	3,404	3,331	3,123

* Includes publishers' sales through consumer and institutional buying.

Source: The Publishers Association (2012), *PA Statistics Yearbook 2011*, London: The Publishers Association.

Academic publishing is a different breed compared to general publishing. The sector, which consists of monographs, textbooks, reference books and journals, had gradually and steadily expanded from the immediate period after the Second World War right up to the turn of the century as higher education and research received ever-increasing amounts of hard cash from governments and other benefactors. Unlike the consumer and popular book sector, purchases by universities represent a substantial portion of the academic sector's sales.

Textbook and research book revenues have remained relatively stable, albeit fragmented and increasingly challenged, as publishers in developing countries undercut prices. Despite around a fifth of them being on open access, journals, too, have seen fairly lucrative returns. Elsevier, the publisher of *The Lancet*, for example, recorded profits of £948 million on the back of revenues around £6 billion last year.⁵ This is possible largely because open access, particularly in the sciences, is subsidised by an inclusive sum from research grants. Most academics in the humanities and social sciences, on the other hand, publish their research in the form of monographs, which unfortunately do not enjoy similar publication-inclusive funding from research councils or grant-making bodies. The cost of producing an academic monograph is also much higher than the cost of producing an academic journal.

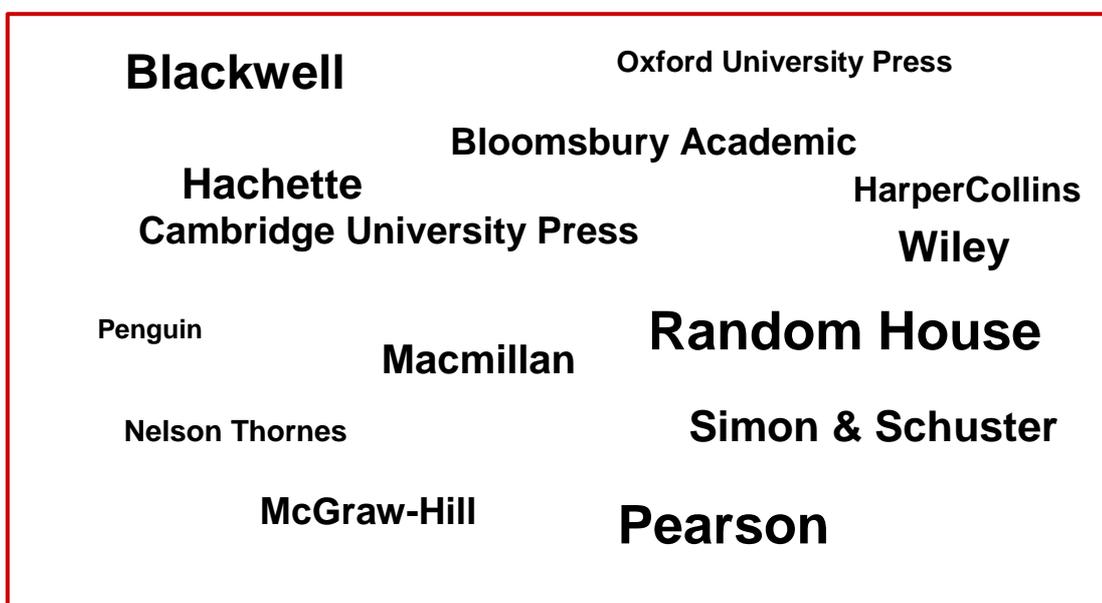
³ Willinsky, J. (2009), "Toward the design of an Open Monograph Press", *Journal of Electronic Publishing*, 12(1), DOI: <http://dx.doi.org/10.3998/3336451.0012.103>.

⁴ The Publishers Association (2011), *PA Statistics Yearbook 2010*, London: The Publishers Association.

⁵ "Reed chief hits back at critics of division", *FT.com*, 16 Feb 2012, available at <http://www.ft.com/cms/s/0/2494fbc4-5873-11e1-9f28-00144feabdc0.html#axzz2B4yPVzxO>, accessed on 29 Oct 2012.

Academic monographs are specialist single or multi-authored books produced as a result of rigorous academic research. Publishers typically make money on the margins rather than on the volumes – these books command high prices, but are sold on relatively much lower quantities to textbooks or consumer titles. With the advent of digital technologies and the Internet, publishers have discovered that regardless of the size of a potential market for a particular book, its viewing rates are significantly higher if it is available on open access than if copies can only be found on library shelves. Publishers continue to spot growing signs showing digital versions of an academic monograph published under an open licences do not necessarily cannibalise the market for the print version and copyrighted e-book versions. On the contrary, open access increases the discoverability of these rather specialist and esoteric monographs, and may in fact help stimulate demand. Figure 1 lists a selection of major players in the academic book publishing sector.

Figure 1: A selection of major publishers involved in academic book publishing



2. The changing landscape and challenges

Academic monograph publishers are now faced with several critical challenges that are fast reshaping the industry, calling the relevance and viability of their time-tested business models into question.

2.1 Shrinking library budgets

Until recently library budgets had failed to increase in real terms as quickly as the growth in student intake. Tightening budgets meant libraries were unable to afford the costs of maintaining a comprehensive monograph collection, while digitisation has increasingly caused libraries to question the need to hold multiple copies of a monograph. UK library expenditure on all books has declined markedly in recent years. The British Library, public libraries and university and higher education college libraries spent £3.2 million, £92 million and £51.2 million respectively on books in 2007/08. Two years on, the respective expenditure was £2.8 million, £85 million and £46.8 million (see Figure 2).

But the recent decline in UK university applications by 7.7% is hardly a boon for publishers either.⁶ This significant fall in student numbers will likely impact on the academic monograph market over the forthcoming years, particularly as this is accompanied by public spending cuts on higher education.

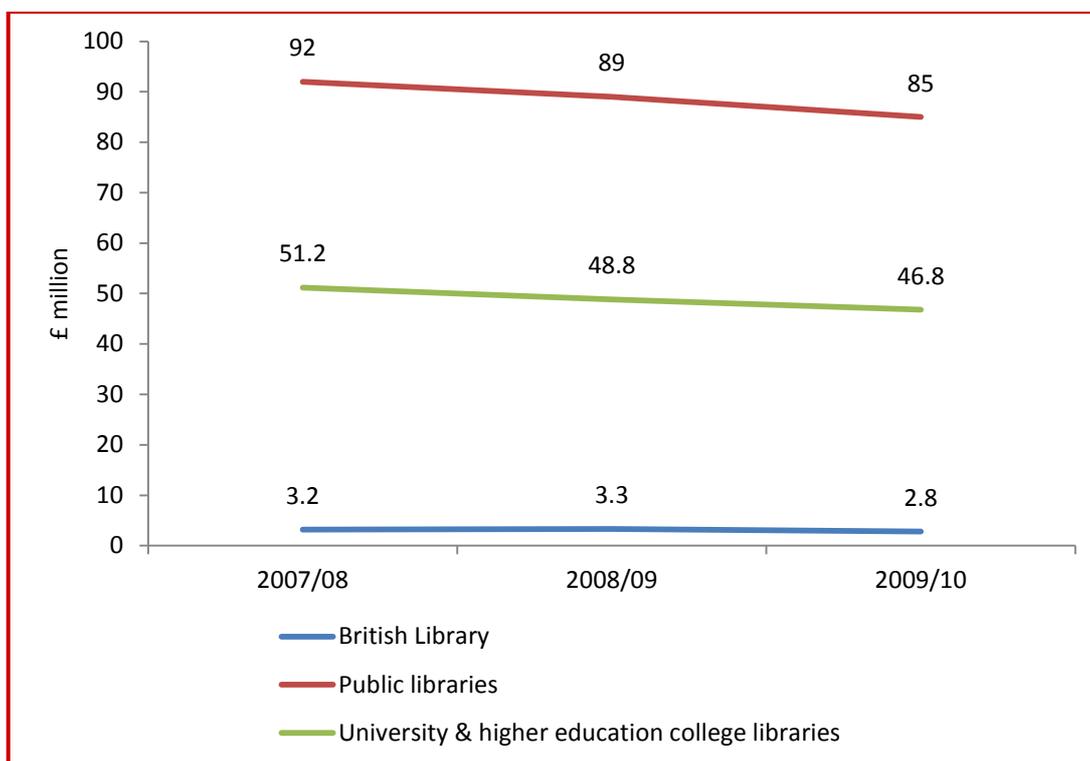
In the heydays of academic book publishing, publishers could routinely sell 3,000 copies of a scholarly monograph. As a testament to the hard times on which the sector has fallen, a similar monograph can now ship only fewer than 300 copies. Consequently, the price of individual titles has inevitably risen at exponential rates. Average prices for scholarly monographs in the US had increased by 78% in the three decades between the 1970s and the early 2000s.⁷ Average invoiced prices in the UK in 2010 for titles in the humanities and social sciences were 30% higher than in 2006.⁸ These have contrived to leave publishers 'skimming the market' rather than penetrating it, let alone establishing a stranglehold.

⁶ "University applications: how do they compare to the same time last year?", *The Guardian*, 9 Jul 2012, available at <http://www.guardian.co.uk/news/datablog/2012/jul/09/university-applicants-2012-ucas>, accessed on 29 Oct 2012.

⁷ Thompson, J. (2005), *Books in the Digital Age*, Malden, MA: Polity; Darnton, R. (2009), *The Case for Books: Past, Present and Future*, New York, NY: Public Affairs.

⁸ The Publishers Association (2011), *op. cit.*

Figure 2: UK library expenditure on books, 2007/08–2009/10 (£ million)



Source: The Publishers Association (2012), *PA Statistics Yearbook 2011*, London: The Publishers Association.

2.2 High origination costs

For these specialist publications, about a third of the costs to the procuring library are attributable to the publisher's origination process, i.e., the work done in producing the first copy ready for print or distribution as a digital file. Covering the origination costs is the prerequisite for the publisher's survival, and this has become increasingly arduous. Although publishers are used to cross-subsidising titles by hedging their losses on the majority of titles with a handful of bestsellers, even this is proving to be more difficult as their profit margins on the latter category is thinning at alarming rates. Meanwhile, pressures on academics in humanities and social sciences to be professionally published have been increasing. Publishers in many ways feel compelled to persevere in what has become an unattractive sector; they view it as a rightful 'service to academic publishing' that is highly important for academics and fundamental to the dissemination of knowledge.

One of the potential solutions explored by the sector was to go down the open access route pioneered by scientific journals. If research funding bodies are willing to include the cost of monograph publication as a proportion of the overall grant, there might yet be hope for academic publishing in the light of tight library budgets and high origination costs. However, the current economic climate and the overall reduction in public

spending on higher education and research make this a very unlikely option. Furthermore, research budgets within the humanities and social sciences are either small or non-existent, and most publications are done outside the boundaries of council-funded research projects.

2.3 Digitisation as a disruptive force

Digitisation is responsible for a significant shift in the publishing landscape, and e-books are currently at the heart of this. Although still an evolving distribution and consumption platform, e-books have thus far proven fashionable with consumers and exciting for traditional trade publishers that have been locked in the print world for a long time. Amazon's sales of e-books now outnumber printed book sales. For every 100 hardback and paperback sold on its UK site alone, 114 e-books are downloaded.⁹ HarperCollins UK anticipate within the next 18 months half of its fiction sales will be in the form of e-books.¹⁰ A survey in the US shows that 82% of libraries currently offer access to e-books, while 66% experienced a dramatic increase in request for e-books in the past year.¹¹

The e-book market is expected to grow considerably over the forthcoming years, as consumers will become more used to using e-readers. Sales of these will be boosted by new product launches, including Amazon's Kindle Fire HD, Barnes and Noble's Nook HD, Apple's iPhone 5 and Google's Nexus 7. The popularity of these e-readers and tablets themselves will be tested when the txtr Beagle, a new low cost, stripped-down version of e-reader hits the market. The impact of this on the sales of traditional books will be even more profound. In order to remain profitable, publishers are moving further into the digital market and embracing this new trend. Encouraged by the fierce competition among large digital platforms for a share of the market, some publishers are disposing of their backlists at significant discounts through these platforms.

What a book is and what it might be are also being redefined. Publishers are also grappling with the question of what an enhanced e-book might look like. Knowing that their existing competencies do not allow them to become multimedia producers overnight, they are forced to experiment with partnerships and outsourcing to add value to their basic book offerings. This has opened the market to multimedia developers, who are only too keen to jump on the bandwagon to create value around the e-book.

⁹ "Kindle ebook sales have overtaken Amazon print sales, says book seller", *The Guardian*, 6 Aug 2012, available at <http://www.guardian.co.uk/books/2012/aug/06/amazon-kindle-ebook-sales-overtake-print>, accessed on 7 Aug 2012.

¹⁰ "Victoria Barnsley: 'We can't think of ourselves as book publishers any more'", *The Guardian*, 26 Aug 2012, available at <http://www.guardian.co.uk/media/2012/aug/26/victoria-barnsley-harpercollins-cant-think-book-publishers>, accessed on 30 Oct 2012.

¹¹ "Ebooks the new normal: ebook penetration and use in us public libraries", Library Journal e-book survey, quoted in O'Brien, D., Gasser, U. and Palfrey, J. (2012), "E-books in libraries: A briefing document developed in preparation for a workshop on e-lending in libraries", Research Publication No.2012-15, Berkman Center for Internet and Society at Harvard University, available at <http://ssrn.com/abstract=2111396>, accessed on 17 Oct 2012.

Although academic publishers are increasingly persuaded to publish more e-books, this doesn't imply that the costs involved are necessarily lower, especially at this nascent stage. The cost of transitioning from print to digital technologies has seen some e-books priced almost as high as print versions of monographs.

Just as publishers are coming to terms with a plethora of new opportunities and possibilities for the distribution and monetisation of published content, academics within the humanities and social sciences are beginning to engage with their audiences in new ways by experimenting with various digital options including videos, blogs and other multimedia formats to augment the text. As a result, universities have also begun to integrate digital information more substantially into their operations. Library users are able to gather information online or through digital publications instead of traditional print materials.

University libraries will increasingly attempt to mitigate the squeezing of their budgets by spending less on academic books and incorporating more e-books and e-journals into their systems for students to access. This has also been helped by the fact that online sites such as Google now have their own e-book systems which enable many academic monographs to be accessed for free.

2.4 A publishing ecosystem in flux

Thanks to the disruptive impact of digital technologies, the academic monograph publishing ecosystem is effectively in a state of flux. As with many players in the 'content' industries, publishers have found themselves trapped in a transitional disequilibrium, where on the one hand they have yet to figure out a way to respond to challenging market conditions and already on the other flummoxed by opportunities in the digital age. Many are just transfixed with what seems like a gargantuan task of figuring out the best possible way to survive, let alone plot clever strategies to thrive. While some suspect their own business models and that of the ecosystem's need to change, few have a clue how this might be best done.

Where previously the ecosystem consisted of only authors, publishers, distributors, libraries and a tiny number of bookstores, it is now intruded into by a number of other players including multimedia developers, e-tailers, software vendors, and hosting and Internet services providers, in addition to the traditional players taking on new value-adding activities (see Figure 3). Online giants such as Amazon, Google and Apple are increasingly staking a claim on publishers' traditional business.

Figure 3: Old and new ecosystems of the academic monograph publishing sector



This has also left some forward-looking publishers seeking to earn a head-start by getting their hands dirty with digital solutions. But because many do not have traditional competencies in these emerging areas, acquisitions have been rife. In July 2012 two major players made significant purchases that signalled their intent to capture the potential of digital technologies. Bloomsbury purchased Applied Visual Arts Publishing for £1.7m,¹² enabling the group to become the leading global academic publishers of applied visual arts, while Pearson bought Author Solutions, a leading provider of self-publishing services, for US\$116 million in cash.¹³ The £2.4 billion merger between Penguin and Random House to create the world's largest book publisher with a combined UK and US market share of 27% and 25% respectively was driven by the desire to be "more adventurous in trying new models in the fast-moving world of digital books and digital readers".¹⁴ These were among the clearest indications yet that the future ecosystem of publishing will revolve around digital technologies.

But digitisation has also thrown the publishing ecosystem out of kilter through disruption to market coordinating mechanisms, such as pricing. Inconsistencies and vast discrepancies in the still fledgling pricing mechanism for e-books have been compounded by powerful e-tailers demanding ever higher discounts. With similar type of e-books selling being priced at anything from £5 to £125, the industry is riddled with unprecedented price discrepancies. Without common standards or norms, publishers are left to themselves to figure out optimal pricing structures, leading sometimes to costly mistakes. For example, Amazon was forced to refund customers on certain e-books published by Hachette, HarperCollins and Simon & Schuster following a settlement between publishers and US authorities over alleged price fixing based on the so-called 'agency pricing model'.¹⁵

Specialist and independent bookstores have found it increasingly difficult to compete with powerful e-tailers. The collapse of Borders in the UK is but just one example.¹⁶ The Booksellers Association, which represents 95% of booksellers in the UK and Ireland, had 4,495 members in 2006, of which 1,483 were independents. These figures had declined to 3,683 and 1,099 respectively in 2009.¹⁷

¹² "Bloomsbury acquires visual arts publisher", *The Bookseller*, 2 Jul 2012, available at <http://www.thebookseller.com/news/bloomsbury-acquires-visual-arts-publisher.html>, accessed on 17 Oct 2012.

¹³ "Pearson \$116m buy boosts self-publishing", *FT.com*, 19 Jul 2012, available at <http://www.ft.com/cms/s/0/34137cce-d1b8-11e1-badb-00144feabdc0.html#axzz2B4yPVzxO>, accessed on 18 Oct 2012.

¹⁴ "Penguin and Random House agree merger", *FT.com*, 29 Oct 2012, available at <http://www.ft.com/cms/s/0/c8b993b0-2193-11e2-b5d2-00144feabdc0.html#axzz2AhRNk4Wg>, accessed on 29 Oct 2012; "Penguin and Random House to merge in £2.4bn deal", *The Telegraph*, 29 Oct 2012, available at <http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/media/9639925/Penguin-and-Random-House-to-merge-in-2.4bn-deal.html>, accessed on 29 Oct 2012.

¹⁵ "Amazon to refund e-book customers following price fix settlement", *BBC News*, 15 Oct 2012, available at <http://www.bbc.co.uk/news/technology-19947069>, accessed on 16 Oct 2012.

¹⁶ "Borders UK goes into administration", *FT.com*, 26 Nov 2009, available at <http://www.ft.com/cms/s/0/87e1fc72-dac1-11de-933d-00144feabdc0.html#axzz2AhRNk4Wg>, accessed on 29 Oct 2012.

¹⁷ Figures from The Booksellers Association quoted in The Publishers Association (2012), *op. cit.*

2.5 Underserved markets

While publishers are still busy finding their feet in the digital age, users who do not have access to well-funded university libraries, and cannot afford to purchase these expensive titles, have in effect become an excluded readership segment. Many people in the developing world are locked out of the market altogether.

Conventional approaches to balancing the interests of publishers and authors, i.e., copyright owners, and the wider readership have been zero sum games. Increasing the incentives for publishers by strengthening or extending their distribution monopolies inevitably results in the underutilisation of copyright resources. Open access may be viewed, at least intuitively, as making no sense to the economics of publishing and the protection of intellectual property, but may enable these specialist and expensive publications to reach a wider audience whose access to these is curtailed by a combination of affordability and the presence of well-stocked universities.

3. In search of an innovative model to coordinate the humanities monograph market

In the light of shrinking library budgets to pay for monographs, rising cost pressures and awareness of the disruptive potential of digital technologies, the penny has begun to drop as publishers increasingly accept that without an innovative and viable market-coordinating economic model for the ecosystem – one that transcends their individual business models – they will most likely continue to struggle selling enough copies of even their best titles to be sustainable in the longer term.

It is improbable that libraries will see a return of the heydays when they were flush with cash. While some solutions exist for broader sales of older titles, they do not solve the problem of funding the origination costs of new monographs. There is also an increasing awareness of the potential of digital technologies to improve access to publicly-funded research. For example, the UK's Finch Review,¹⁸ commissioned to explore the possibilities of expanding access to research, has recommended experimentation with new and open access models for books. The government's recent response has been to encourage the Research Councils to adopt the so-called 'gold' model, whereby research projects include publication hosts within their bids for public funding. But, as described, publishing academic monographs in the humanities and social sciences differs considerably from publishing scientific research in journals.

In the light of these game-changing developments, the challenge is to find a model for the ecosystem that benefits every major stakeholder. It has to be one that makes publishing academic monographs a sustainable venture for publishers, enables libraries and their users to access these monographs at relatively low costs, continues to help the academic community to deliver insights and knowledge to the wider society, leverages on digital technologies to foster more open scholarly communication, and facilitates value-adding activities in the industry by enabling technology developers to flourish.

3.1 The proposed Knowledge Unlatched solution

Frances Pinter, founding publisher of Bloomsbury Academic and pioneer of the use of the Creative Commons non-commercial licence in monograph publishing, believes there is a model that can achieve all these simultaneously. For several decades Dr Pinter has

¹⁸ See <http://www.researchinfonet.org/publish/finch/>

been at the forefront of adapting academic publishing to new market conditions. As Publishing Director at the Soros Foundation (Open Society Institute), she helped develop market-oriented publishing in some 30 countries of Central and Eastern Europe and Mongolia after the fall of communism, and established eIFL, a library consortium straddling nearly 50 countries. She discovered that making titles available for free to readers in HTML generated as many, and often more, sales than when books were published using traditional closed approaches.

Now she is attempting to drive change in the academic monograph publishing ecosystem by spawning a radical model that revolves around on a market-coordinating global consortium appropriately named Knowledge Unlatched (KU), a not-for-profit community interest company incubated at the Big Innovation Centre, London.¹⁹

3.2 A global consortium

Central to this innovative market-coordinating model is a global consortium made up of libraries and publishers. It is estimated that potential library members that can be drawn from the ecosystem are 8,000–12,000-strong, made up primarily of university and research libraries in the UK, Europe, Australia and the rest of the world. Whereas in the US, these are primarily libraries in Carnegie Classes 15–17 and Carnegie Class 23. Some of these libraries may also participate via existing consortia, where there are over 500 of them around the world. Several that have registered an early interest or have committed to pilots include the League of European Research Universities (LERU), the Association of European Research Libraries (LIBER), the Association of Research Libraries (ARL) in the US, and the Society of College, National and University Libraries (SCONUL) in the UK. Participating publishers would include mainly university and commercial presses.

Dr Pinter believes other players in the industry could have spotted this niche and formed a similar consortium to address the existing challenges in the ecosystem. She lamented:

“Library suppliers are the natural ones to do what Knowledge Unlatched is doing, but they just aren’t doing it. Clearly there is a gap.”

3.3 Addressing the gap: how the model works

Given that the bare minimum that allows publishers to stay in the game is to be able to cover their origination costs, participating publishers will offer scholarly monographs and

¹⁹ A community interest company (CIC), is a legal structure for not-for-profits that has existed in the UK since 2005 to promote social enterprises. A CIC is a limited company that is guaranteed either by members or shareholders. KU is guaranteed by its members. Legislated under the Companies (Audit, Investigations and Community Enterprise) Act 2004, a CIC is similar to a US 501(c)3 corporation that allows for entities with a social purpose to engage in commercial activities without the purpose of generating profits for shareholders.

specialised academic titles via KU for a fixed 'title fee' that will allow them to recoup the origination costs in addition to obtaining a modest operating margin. In theory, a publisher's operations would be sustainable were it to sell all of its titles under this model. In practice, however, which and how many titles are offered will be based on publishers' discretion. The exact amount of the title fee for each monograph will be negotiated between KU and the respective publishers. KU also undertakes to make the basis of the title fees transparent to all stakeholders within the consortium.

Participating libraries select titles they wish to purchase either from individual title catalogues or as collections, as they currently do from typical library suppliers. Their selections are sent to KU, who will then coordinate shared upfront payment of title fees by participating libraries. The library review and selection process will act as a de facto market demand mechanism to ensure that publishers offer books of sufficient quality to the consortium. The entire process is done through an online selection architecture that informs KU the titles requested and the stipulated prices, thus ensuring transaction costs can be minimised.

For example, if 400 member libraries were interested to purchase a particular title whose fee was £8,000, each acquiring library would pay £20. It is obvious that critical mass matters. The size of the consortium, notably the number of participating libraries, plays a crucial role in bringing the cost to each library of acquiring a single title down. If there were 600 acquiring libraries for the same title in our example, the charge to each would be £13.33 (see Table 4). On the other hand, network externalities can create a virtuous circle of participation and the efficiency. The larger the number of participating publishers, or the titles they make available, the greater the incentive for libraries to participate, which makes the consortium even more attractive for initially sceptical publishers.

The reverse also holds true. If there were insufficient number of libraries intending to acquire a title, the cost per acquiring library might be rather prohibitive. As such, just like the minimum thresholds that exist in the Groupon model, the library buying group may set a criterion for the minimum number of libraries required for a particular title, given its title fee, to enable the purchase to be made.

Upon receipt of the title fees, publishers make the selected titles available on open access in PDF, html or some other basic digital format. These would be licensed under Creative Commons or equivalent open content licences, with the degree of restriction on derivative products to be specified by publishers. While there will be no volume discount based on the number of titles selected, as the title fees are fixed and publishers' origination costs are not volume driven, acquiring libraries obtain value as publishers are required to make print copies and e-book versions of the selected titles available to them at a significant discount off the recommended retail price, which publishers retain

the right to set. In this way, even if participating libraries wish to purchase print copies, the total cost to them per title will still be substantially lower than what they currently pay in the existing market.

Table 4: Illustrative figures based on the old print model and the KU model

Old print model for a typical monograph

	£	£
400 copies sold to libraries @ average £50 per unit		20,000
Fixed origination costs	8,000	
Variable printing & production, marketing, distribution, royalties, suppliers	18,000	26,000
Profit/loss on the monograph		(6,000)

Outcome: no-win situation where although libraries obtain print copies, each has to pay £50 per copy, while the publisher incurs a £6,000 loss.

The KU model for a typical monograph

	£
Fixed origination costs*	8,000
400 member libraries pooling to meet origination costs @ £20 each	8,000
600 member libraries pooling to meet origination costs @ £13.33 each	8,000
Profit/loss on fixed costs	0

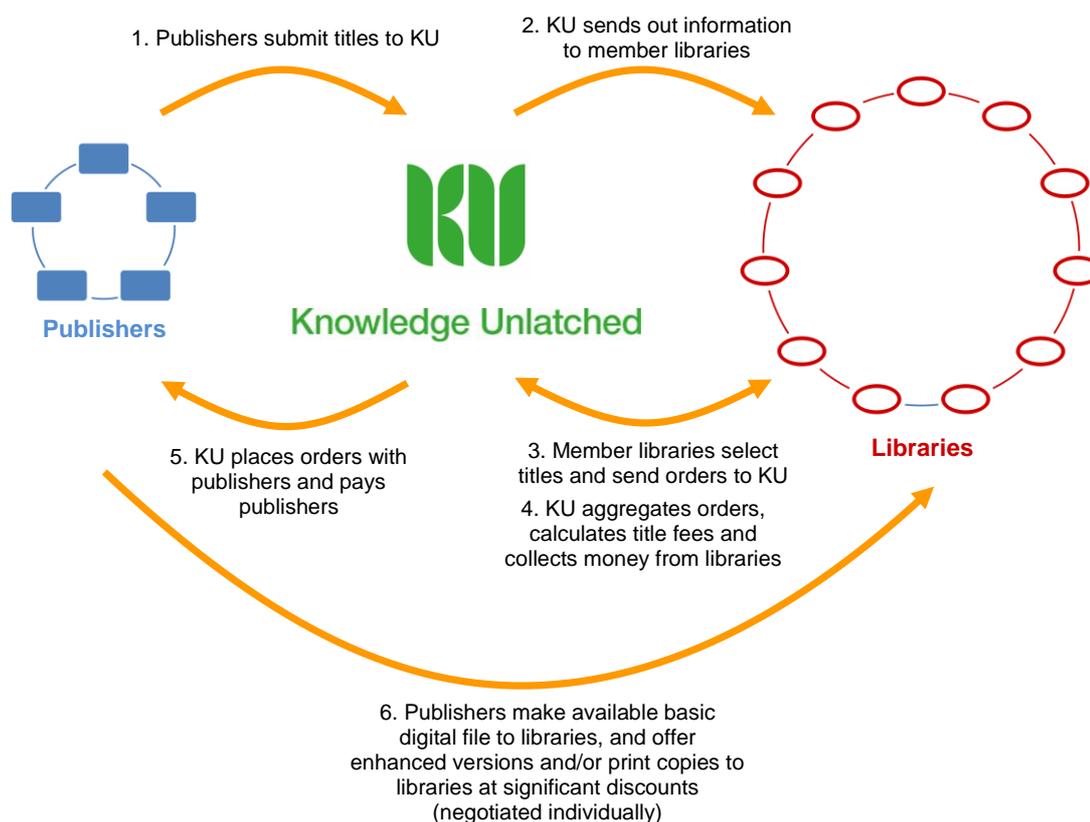
Outcome: win-win situation where libraries obtain basic digital file of the monograph at 60% (assuming 400 libraries) or 73% (assuming 600 libraries) reduction, while the publisher covers fixed costs. Libraries can variably opt for value-added digital versions and/or print copies at significant discounts.

* Publishers may also build in a modest margin on origination costs so as to incentivise publication.

In addition, value-added, or premium, versions of e-books or other digital formats are also made available for exclusive purchase at discounted rates by member libraries. These may include multimedia services, extra metadata/cataloguing, and the delivering of data to library discovery tools. Preferential discounts on publishers' other complementary products, too, may be offered. All these not only help address potential free-riding issues that are rife in the digital economy, but also add value to libraries' participation in the consortium and enable publishers to derive extra revenues on top of the title fees. Publishers meanwhile retain the usual rights to sell print copies and all digital formats to non-members and bookstores at retail prices they set. Figure 4 illustrates the model's market coordinating mechanism.

KU Research Director Lucy Montgomery stressed that although the model operates primarily through a unique market-coordinating mechanism, its structure is nonetheless flexible and nimble enough to accommodate changes throughout the whole of the academic communications ecosystem. This is helped by the fact that KU will operate as a lean entity, and is not owned by members of the consortium.

Figure 4: How the KU model coordinates the market



3.4 Sustaining the consortium

External funding will be the lifeblood of KU in its first few years, as it pilots and seeks to rapidly scale up. Once the consortium reaches a certain size, a small margin built in to the title fees paid by libraries will support the running costs of KU. Dr Pinter and Dr Montgomery anticipate KU can engage with up to 400 libraries and over 20 publishers by the end of year one, and handle around 100 titles in the first year, just over 700 titles by the third year and at least 1,000 titles per annum thereafter. However, because the model is enabled by digital infrastructure, there is potentially no limit to the number of books that can come through KU.

Assuming the average title fee for a book is £8,000 and total revenues therefore topping £8 million per annum, KU envisages its operating costs to settle at around 5% of the total annual title fees. The average cost to each member library will likely be around £15 per title, although this may fluctuate between an upper-bound of £20 and a lower-bound of £10 depending on the take-up for a particular title – a market changing cost per product compared to current market rates. Being a community interest company and a not-for-profit, any surplus derived from the 5% administration fee is ploughed back into

the system to further reduce the title fees libraries pay.

3.5 A fine line between success and failure

While the model will ultimately be judged on whether it can live up to its promise of keeping the costs of academic monographs low and affordable to libraries, enabling wider access of these specialist and often esoteric publications, and keeping academic publishers in business, the key litmus test in the nearer term is whether enough libraries will sign up and titles put through the model for it to become sustainable. Given that critical mass is paramount to the model's success, the greatest risk is obviously that of scale. Insufficient number of libraries taking up membership will simply mean origination costs will not be spread more thinly, while the more reluctant publishers are in offering their titles to the consortium the less attractive the model is to libraries.

Closely related to this is also the speed at which library members and publishers' titles can be acquired. The point at which the model's mechanism becomes a norm in the ecosystem for publishing academic monographs is when the model is considered to have achieved sufficient scale. As Dr Pinter put it:

“...when it becomes established enough among publishers – when academics and publishers naturally consider their titles to be KU titles.”

But getting to that point can be a protracted process. KU has set itself an ambitious target to get there within three years. Failure to do so may leave KU in a limbo as its start-up funds are expected to last only that long. No matter how potentially efficient and industry-changing the model may be, getting stuck mid-stream may be detrimental to the ecosystem as it means not only participating publishers and libraries that have staked a substantial part of their future on the model succeeding will be thrown back to square one, the entire academic publishing ecosystem, too, will revert to status quo.

In terms of widening access, the model will have succeeded when the procedure for open access becomes institutional, that is when academics completing a monograph will have readily available and widely used mechanisms to systematically acquire an open access licence. However, this may inadvertently create deep resentment among industry intermediaries such as library suppliers, who may see this as a threat to their primary businesses. The key to mitigating the risk of sabotage and to creating an inclusive ecosystem where every player contributes to the publishing value chain is to work with intermediaries to realign their roles to provide innovative value-added products and services.

4. Discussion and implications

The KU model takes a ‘whole of market’ approach to coordinate an innovative shift in the business model for the academic monograph publishing ecosystem. It is important to note that the model operates at the level of the industry in terms of affecting how the ecosystem works, instead of necessarily dictating a change in the business models of ecosystem members. This, however, does not preclude the probability that members of the ecosystem, insofar as they participate in the model, will need to rethink their own business models in the light of a radical shift in the ecosystem.

4.1 A radical business model for the ecosystem

The KU model seeks in essence to further the dissemination of knowledge. Although this may not seem to be anything out of the ordinary, this model is actually both unique and radical because the status quo in the ecosystem has led to a severe crisis afflicting academic monograph publishing worldwide, and has in effect curtailed the spread of knowledge. The model seeks to disrupt the status quo. The current lack of an overarching model capable of coordinating the market means publishers and other players in the ecosystem are left to battle it out with their own business models for a slice of the shrinking market. Had this worked there would have been little need for an innovative model that, at first glance, may look like an antithesis of a market approach. But the reality is that this has resulted in a more depressed ecosystem that is already in a flux due to the disruptive impact of digital technologies.

The model is nonetheless built on experiments in open access publishing that have already been carried out across the publishing industry, as well as the long established consortium purchasing models that have been used successfully by libraries for many years. What the KU model seeks to do is to change how the market pays for the publishing process and, in making these changes, to demonstrate that there are less expensive – and more efficient – ways to achieve both professional publishing services and open access. That which is innovative, however, is the **integration** of multiple models into the overall, which we call a **market-coordinating model**.

A salient aspect of the model is to find enough money to enable publishers to meet their origination costs. By adopting a confined variant of what has become known in recent parlance as **crowdfunding**, the model draws such financial resources from an integral component of the ecosystem – a consortium of participating libraries. The model’s mechanism to coordinate payment and distribute it as title fees to publishers has all the echoes of a **cooperative model** of pooling and scale. Scale in this instance is of

paramount importance, as it is a key determinant of the model's sustainability in the longer term. Like a cooperative, the model is run by a legal entity – KU plays the role of a convenor. Unlike a cooperative, however, KU is not owned or controlled directly by the network's members, but by its own management board.

In some ways, this is also a variant of the **freemium model**. The title fees participating libraries pay in effect buy them not the basic stripped-down digital file, which is put on open access anyway, but the right to obtain enhanced, or value-added, versions of the monographs, print copies and other digital services at significant discounts. However, these premium services will not be available should there be no mechanism to pay for open access in the first place. Without open access, it is unlikely these esoteric monographs will be discovered by wider segments of potential audience, which in turn goes against the grain of making knowledge widely accessible – something that academics, i.e., the authors themselves, greatly value. As somewhat reflective of a **licence fee model**, although non-participating libraries may free-ride their way to the basic digital file on open access they do not have the 'licence' to the same rights and privileges participating libraries enjoy.

4.2 An ecosystem of potential winners

The market-coordinating model is, for all intents and purposes, not antithetical to a market approach. Instead it, at least potentially, creates winners from every both sides of this two-sided market – a win-win which they seem to-date to have struggled to forge independently. Through coordination of the market, the KU business model innovation helps create a more efficient and sustainable market for academic monographs. This is the prerequisite for keeping key players in the game. Thereafter, various members of the ecosystem are free to creatively engage in rent-seeking activities built on outputs from the earlier coordinated activities.

Publishers will have a clear incentive not to exit the increasingly unattractive academic monograph sector as the model helps them mitigate the risks of publishing. It enables them to at least cover the origination costs of publishing monographs, which are not dependent on sales volume and are high enough to squeeze profits significantly, and derive a modest margin along the way. After fulfilling their obligation to put the basic digital file on open access in exchange for the origination costs paid, publishers are free to deploy their most innovative business models to make money from value-added, premium services that revolve around the basic monograph. These services are available to purchasers within the entire ecosystem, not just to members of the consortium.

Spurred on by digital technologies, the uses of content is growing and becoming increasingly varied. The model enables publishers to create new uses of content, reach new audiences and market segments, and set new and varied price points for different

markets. As the basic version of the monographs will be available on open access, publishers will also benefit from the greater discoverability of their titles within wider markets for scholarly outputs.

Libraries, many of which are already experiencing very tight, if not significantly reduced, budgets will benefit from reduced costs of procuring academic books for their collections. It is clear that based on even KU's most conservative assumptions for modelling the payment architecture, libraries will pay at the most £20 per title for enabling open access and the privilege of buying print copies or enhanced digital versions at significantly discounted prices. Given that recommended retail prices for a print copy of an academic monograph in the humanities and social sciences today can range from £50 to £80, and libraries typically negotiate a 30% discount off these prices, the KU model gives libraries an opportunity to purchase the same print copy at an even lower price. Once the model achieves the desired scale, the cost to libraries of purchasing individual titles will decline very significantly.

However, not all libraries are keen on print copies. Depending on the demographics of their user base and overall library strategy (e.g., to promote greater remote access, or virtual learning), some libraries may prefer to hold several digital versions of the same monograph in their collections. Well endowed university libraries may want a variety of value-added, premium services. Other libraries may want to be seen as contributing to making open access a norm for knowledge dissemination worldwide. This will enable users in poorer economies, whether or not they have access to libraries, to access these monographs. Libraries operating on shoestring budgets, too, can at least have access to the basic, stripped-down digital version. The KU model provides libraries with all these options.

The model also benefits academics who author these monographs. Many more of academics' works now stand a greater chance of being published as the model increases publishers' confidence in undertaking projects that they would have previously been reluctant to pursue due to uncertainties surrounding their viability. Academic monograph publishing is a unique sector of the wider publishing industry, as academics do not necessarily author books based on market demand or the popularity of a subject. Many do so to showcase their research and to disseminate knowledge distilled from rigorous studies. As such, these works are usually held in a small number of libraries that can afford these relatively expensive monographs and are accessed by a small segment of users, usually those researching the same subjects. The model, by way of open access, enables greater discoverability of these works, which in turn may generate a number of positive externalities, including increased exposure for authors and more opportunities for engagement with library and scholarly communities.

Other parts of the ecosystem, too, stand to benefit from the model. Multimedia

developers and software vendors will be engaged to develop enhanced, or value-added, versions of the digital monograph. As more of these monographs stand a chance to be published, and thereafter made available in various formats and versions, e-tailers in retail markets will have the opportunity to enrich their catalogues. IT solutions specialists, application developers and web hosting providers are well poised to capture business opportunities arising from delivering open access. Distributors can continue aggregating supply and demand, albeit in new forms and in ways that are substantially shaped by digital technologies and the model's impact on the market.

5. Conclusion and wider implications

The KU model may serve as a catalyst to the spawning of other models to coordinate markets where deep-seated inefficiencies not only make rent-seeking difficult for the players involved but also place the future of whole sectors or industries in jeopardy. These inefficiencies may be particularly rife in sectors heavily affected by the disruptive forces of digital technologies that create consumer demand for new types of products and services, change the way products and services are consumed, and render existing business models obsolete overnight. The central tenets and key ideas of the model may be applied to drive change in, for example, the newspaper publishing, entertainment and media industries.

While the principle of shifting from pure market economics, where a product or service is exchanged for payment on an individual basis, to aggregating demand and bundling payment is not new – cooperatives have been doing this all along, and so has the music industry in terms of collection of royalties – the KU model extends this further by actively negotiating and structuring payment on behalf of key players in the ecosystem. It in effect reconfigures the basic business model of the ecosystem by incentivising the major players to adopt a generic standard approach for covering costs and purchasing books while retaining the prerogative to engage in market transactions beyond that. Although the KU model may not necessarily be the optimal model for the academic monograph publishing sector, it nonetheless challenges the traditional paradigm of covering costs through unit sales.

In large part because the model, being a fundamental intervention in the market, reshapes the way business is conducted in the academic monograph publishing ecosystem, it also to a certain extent redefines the players' roles. When content used to be 'king', the balance of power mostly tipped in favour of publishers, who controlled content. The advent of digital technologies has changed the way the game is played, and consequently the balance of power. It is no longer just about content, but also the intertwined aspects of context and distribution.

The digitisation of delivery platforms has made distribution possibilities more varied. The likes of Amazon, Google and Apple are now part of the ecosystem and have in fact become powerful intermediaries. Publishers have been rudely awakened to the fact that they have now become bit-part players. Varied distribution possibilities also affect the context within which the monographs are used. The possibility of accessing monographs on digital platforms such as e-readers means value is attached to the context of use, such as mobility of a monograph (it can follow the user wherever s/he

goes), on-demand availability (eliminating the need to wait for it to be fetched from the library) and as a useful resource for research (additional services like multimedia, DVDs, commentaries, recent research updates and author's blog). Publishers now have to think more creatively on how they might add value to the monographs by collaborating with other new players in the ecosystem, such as multimedia developers, to provide a variety of differentiable premium services.

The librarian's role, too, is changing. Historically, the librarian's role is to build collections by expending the university's budget for the library. The yardstick with which libraries were measured for their quality used to be the breadth and depth of their collections, normally understood to be print copies. The modern librarian's role is increasingly to help users find and use what is relevant and helpful for their needs. Libraries are increasingly regarded for how appropriate their resources are for their clientele. Libraries in teaching universities where the users are predominantly young undergraduates will probably appreciate digital versions and e-formats more than hardbound copies. Intensive research libraries will probably value premium services that can help researchers in their work. Library professionals are also increasingly sought to help researchers and academics better understand where their published monographs have gone, who the users are and how to better engage with them, how the monographs are used, and how they might be used differently. The KU model, as it both harnesses and encourages the spread of digital technologies, indirectly facilitates this shift that is already gathering momentum.

The model's impact on the academic monograph publishing sector goes beyond making it more sustainable, but also promoting a culture of ethically accessing these valuable works of substantial erudition and investment. As it is an integral part of the model to enable open access of academic monographs, the wider accessibility of these books, besides aiding the dissemination of scholarship out of universities, will negate the *raison d'être* for unauthorised distribution. In what is known as the dark side of digital technologies, illegal online distribution of these monographs is acknowledged to be rife, particularly in markets where access to these is either non-existent or very costly. Open access renders these rogue channels irrelevant.

In the larger scheme of things, this radical model poses the question of whether it is one that can only be adopted by a social enterprise on a not-for-profit mission to undertake some form of social innovation. In other words, this begs the question of whether a for-profit commercial entity might be able to viably adopt a similar model to coordinate markets in other sectors and industries. In performing its convening and market-coordinating role, KU effectively acts as the guardian of multiple parties' interests within the ecosystem, particularly those of libraries', library users', publishers' and academics'. The question of whether a commercial entity may be able to do likewise while simultaneously seeking to maximise shareholder value is one for future research.

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