

Chapter 2

Access to Knowledge: Universities and Libraries

¹A key theme of this thesis is that open access is both an emancipatory project, and also an ideologically driven tool being used for political purposes. Continuing the historical analysis begun in Chapter 1, this chapter shows how these entangled and seemingly contradictory aspects of open access are related to earlier iterations of the expansion of access to knowledge, when similar contradictions were already present. Since the focus of the thesis is on open access policy in the UK, it is to an earlier period of British history that I will first turn in order to demonstrate these historical continuities – namely, the Victorian project of expanding educational opportunities to a broad swathe of the British population. This was the epitome of nineteenth-century British political liberalism: a political project that encompassed a self-help ethos and sense of civic duty, a benevolence towards the poor, and a belief in capitalism and markets as a driver of progress.

In using the phrase 'access to knowledge', I am deliberately alluding to the diverse array of political activism related to intellectual property that has been grouped under this term in the past decade or so (Kapczynski 2010: 17), but this chapter has a narrower focus on access to *research outputs* (see Chapter 1 for a definition) and participation in the higher education system that is the primary site for the reading and writing of these outputs. By using a historical perspective it becomes clear that access to knowledge has undergone a long, slow process of change, related to developments in mass literacy, libraries, and higher education. This chapter examines the role of two specific kinds of institution with regards to enabling public access to research: the universities in which much of the labour of undertaking research occurs, and the public libraries that play a role in ensuring that scholarly works can make their way into the hands of the general public. Although it is not possible to offer comprehensive histories of these topics within the scope of a single thesis, the discussion given here provides context to contemporary debates about access to knowledge by situating them within a longer history than has been usually been accorded.²

Increased access to knowledge in Victorian Britain

In the Victorian era, education in the UK underwent significant reforms. This occurred in part

- 1 [M.E.: do more to partition the section on libraries and then the section on universities. At the moment there is quite a tendency to oscillate back and forth between the two and it makes for a bit of a confusing ride.]
[the work on the colonial context is going to be integrated more fully into the main body]
- 2 [C.E.: 'footnote needed here – which sources do you have in mind?']

through the efforts of liberal reformers³ who believed that educational opportunities should not be restricted by class. However, an additional political driver for education reform was its use as a means of controlling the working classes.⁴ So increasing access to knowledge beyond traditional elites was both a desired outcome for believers in enlightenment values and also a means of social control. How these reforms developed for compulsory school-age education has been the subject of detailed scholarship elsewhere (see [Royle 2012: 403–423; and others]); in this section, the focus is on two specific institutional forms: public libraries and universities.

For most of their history, libraries have existed to serve specific communities, although some were also open to members of the general public. The UK is generally recognised as the first country to legislate for a nationwide library service⁵ and so transition from a patchwork of local community and membership libraries⁶ to what would be recognised today as a modern national public library service. The term ‘public library’ was used in Britain as early as the seventeenth century to describe libraries supported by a variety of funding models (Kelly 1977: 3–4): endowed libraries (founded by philanthropists), subscription libraries,⁷ and institutional libraries. These models encompassed a diverse range of library types, from the institutional libraries of religious organisations through to co-operatively owned workers’ libraries. When public libraries in the modern sense – i.e. publicly-funded institutions for use by the whole community – were created, they built on this earlier legacy, in some cases very directly with the transfer of books and buildings (Kelly 1977: 72–74). The idea of public libraries as a network of institutions to serve an entire nation only became possible in the UK following the 1850 Public Libraries Act which allowed town councils to establish libraries funded by raising local taxes. Over the next century the national network slowly came into being with steady growth in the number of libraries, driven by further legislation such as the 1919 Public Libraries Act that extended library provision beyond urban centres to counties as well (Pemberton 1977: 13–15). The amount of funding that could be raised through taxation was limited so many libraries relied on philanthropy from wealthy individuals to fund the acquisition of reading materials, with the steel magnate Andrew Carnegie taking a leading role in paying for the buildings themselves (Kelly 1977: 115–137; McMenemy 2009: 27–30). Library provision to all finally became a statutory obligation of local authorities with the 1964 Public Libraries and Museums Act.

Libraries have often been idealised as ‘neutral’ and classless,⁸ which obscures their political dimension. Indeed, class relations were intrinsic to the public library movement that led to the

3 [such as...? Name them]

4 [citation needed]

5 To qualify this statement, it should be mentioned that the UK’s initial legislation only *allowed* individual local authorities to raise taxes for public libraries, rather than *require* them to do so. And legislation was also passed at a local/State level in the US around the same time, such as in New Hampshire in 1849 and Boston in 1852 (Shera 1949: 165–188).

6 [sentence or two to establish this would be helpful]

7 Subscription libraries lasted until the mid-twentieth century when they were finally supplanted by tax-funded libraries (Black 2000: 115; Kelly 1977: 344).

8 See Pateman (2000) on class and Lewis (2008) on library ‘neutrality’.

original British legislation in 1850 – enacted after campaigns by Liberal MPs William Ewart and Joseph Brotherton – with Victorian middle class notions of social- and self-improvement a key driver in the idea of providing library facilities to all (McMenemy 2009: 24–25; Pemberton 1977: 9–10). Public libraries were created with the aim of ‘bettering’ the working classes⁹; they were designed as cultural institutions that would shape public taste and foster ‘good citizenship’ (Black 2000: 4). It was thought by some advocates that providing free literature to workers would dull revolutionary tendencies and interest in radical socialism (Black 2000: 25–27, 145–146; Black, Pepper, & Bagshaw 2009: 42–43). Conversely, Rose argues against this – rather than instil bourgeois values, working-class education was a means for workers to break out of prescribed class roles (Rose 2010: 23). If ‘economic inequality rested on inequality of education’ (Rose 2010: 24), then institutions designed to provide greater equity of access to knowledge were part of the egalitarian spirit of liberal reform. Equity of access is seen as central to the purpose of public libraries, with McMenemy arguing that they ‘represent the ideal that everyone within society deserves the right to access materials for their educational, cultural and leisure benefit’.¹⁰

Although the image¹¹ of public libraries is one of a progressive social institution that provides greater equality of opportunity to people of all social backgrounds, a central contention of this chapter is that a counter reading can also be made of the history of working class education in the UK, against the idea of liberal progressivism: there was a gradual shift of control out of the hands of the workers themselves and towards the governing classes. Working-class education expanded greatly throughout the nineteenth century, and not only through state-sponsored channels: mutual improvement societies, co-operative societies, miners’ libraries and mechanics’ institutes all contributed to adult education. It began with working class activists organising among themselves, was later solidified into institutions such as mechanics’ institutes which were much more heavily reliant on middle-class patronage, and finally led to state control of education.¹² While in some ways this was a victory, resulting in universal free education for all children regardless of class, it also diminished traditions of mutual support and self-organisation in place of benevolent ‘care’. This narrative is somewhat over-simplified – after all, self-educated intellectuals were always a minority within the working classes (Rose 2010: 236) – but raises important issues around power relations that are discussed further below. Public libraries were part of this process. The state-funded public library network that was becoming fairly comprehensive by the early twentieth century did offer greatly expanded opportunities for working-class people to access books, but at the cost of removing some of the agency¹³ from the decision over what to purchase that was present in the small local libraries of a century earlier.

Since the ideals that were presented in favour of expanding access to public libraries (and

9 [define working-class]

10 McMenemy (2009: xiii). See also the IFLA/UNESCO Public Library Manifesto (1994).

11 [evidence? Image outlined by whom?]

12 [primary sources needed here]

13 See Baggs (2004) for details of this process in action in the miners’ libraries of south Wales.

higher education) are emblematic of the liberal enlightenment, it is also vital to remember the destructive legacy of colonialism and empire that coexists within this same tradition. Comparing the creation of public library services in the UK with the experience of some former colonial nations shows the imprint of this imperialist legacy and the fight against it. For instance, New Zealand had an incredibly high density of libraries within a few decades of European colonisation but these were almost all subscription libraries rather than being municipally-funded (Traue 2007: 153), as were the British-introduced libraries in Malaysia until American organisations introduced free libraries in the 1950s.¹⁴ The Dutch colonial administration in Indonesia created 2,500 public libraries to cement its authority through instilling its values (Fitzpatrick 2008).¹⁵ While Britain was responsible for introducing modern public libraries to some countries,¹⁶ it used a similar propagandist model to the Dutch in various African and Asian colonies (Fitzpatrick 2008: 283). In 1930s India, on the other hand, Ranganathan saw libraries as part of an anti-colonial political project, ‘draw[ing] a link between open access to knowledge and the need for wider social transformation’ (Roe 2010: 19). Although a scattering of public libraries already existed in various Indian cities (Patel & Kumar 2001: 2–14) these did not cover most of the population, and the movement to create a national network of public libraries (along with mass literacy and education) was grounded in the struggle against colonial rule (Roe 2010: 18–32). These histories show a diverse global picture in terms of the political dynamics of introducing national public library systems, particularly in terms of their colonial origins, with lasting consequences for their future development (Cram 1993; Ignatow 2011; Ochai 1984; Odi 1991). Widening access to knowledge has been viewed as both emancipatory and, conversely, as a tool for indoctrination.¹⁷ If public libraries are governed solely in the interests of governing classes rather than for ordinary citizens, their potential for facilitating a more equitable distribution of knowledge is diminished.

Formal higher education also underwent significant changes in the nineteenth century, moving far beyond its medieval origins.¹⁸ English higher education had remained highly exclusive for

14 Yu (2008: 65–67). The US also played a similar role in Japan (ibid. pp.67–68).

15 See also Sulisty-Basuki (1998) for more historical context.

16 For example Ethiopia (Coleman 2005), but see also Rosenberg (1993) on the British colonial authority’s lack of interest in setting up a national library service in Kenya.

17 See Rose (2010) on the importance of paying attention to readers’ own perceptions of the effect of reading and education, rather than relying entirely on theoretical exposition.

18 Although there is not space in this thesis to discuss the full history of universities at length, this footnote can give some historical context. The ‘medieval origins’ of universities are contested, since various institutes of teaching and scholarship have existed for millennia across many world cultures, from Confucian schools in Han dynasty China to the madrasas of medieval Islam. However, histories of universities in Western Europe do place their origins in the medieval period, with the oldest European universities – in Bologna, Paris, and Oxford – founded in the high middle ages (c.1100-1200). At this time, intellectual learning in Europe primarily took place in monasteries and cathedral schools, while practical instruction in crafts and technologies occurred through the guild system (Pedersen 1997: 113–114). Already-established centres of learning in Bologna and Paris evolved into universities through changes to the organisation and legal status of students and teachers (Pedersen 1997: 139–145), with the term *universitas* referring to the community of pupils and masters rather than an institution as such (ibid. p.151). As well as monastic traditions, the universities built on earlier traditions from schools in the Middle East, Greece, and Rome – for example, the breaking down of scholarship into distinct disciplines has roots in Aristotle’s Lykeion, which was also the first known school to combine teaching and research – as ancient scholarship was slowly reintroduced to

centuries with only two universities – Oxford and Cambridge – for over 600 years, with an additional four ancient universities in Scotland, one in Ireland, and none in Wales.¹⁹ And ‘with the exception of the Scottish [universities], which were open to all comers, entrance to each of the English and Irish institutions was restricted on the grounds of expense and belief’ (Whyte 2015: 4). The process of opening up university attendance to a broader public began around the turn of the nineteenth century; new universities were created in Britain’s civic centres such as Manchester, Liverpool, and Birmingham (Collini 2012: 27–28) and the modern idea of a university was born (Readings 1996: 7; Rüegg 2004: 5–6). However, the first new universities still all had religious connections: the Catholic Maynooth College in Dublin (founded 1795), and the Anglican St David’s College Lampeter (1827) and Durham University (1832) (Whyte 2015: 30–33).²⁰ London lacked a university until the founding of University College London in 1828. Inspired by the University of Berlin, it was explicitly designed to cater for the middle classes, and as the UK’s first secular university it was the first of the new British universities that was not reliant on support from both church and state (Whyte 2015: 36–37). King’s College London was founded as a direct Anglican reaction to this (Whyte 2015: 43–44).²¹

The number of institutions of higher education gradually expanded throughout the rest of the Victorian era, with new British universities looking more to Scotland, Germany, and the United States for inspiration than to Oxford and Cambridge (Whyte 2015: 135).²² However, this did little to make higher education available to the masses, with student tuition fees at UCL and KCL too high for most people (Whyte 2015: 63) so they still served a small clientèle; it would be another century before a mass higher education system developed (see below). The 1870s saw the first real attempts to bring the benefits of higher education to women and working class men, through public ‘extension’ classes taught by university lecturers (Whyte 2015: 113–114). This kind of ‘outreach’ activity was possible because by the mid-nineteenth century, education reforms meant that most adults were literate to some degree,²³ and thus details of the occupations of registered library users in the 1870s show that a majority are of the working classes (Kelly 1977: 82–83). The coupling of broadened access to education with public library provision resulted in a dramatic expansion of public appetite

Europe through contact with Islamic culture (Pedersen 1997: 1, 13–14, 116–122). By the thirteenth century universities were opening across Western Europe and the traditions of teaching and learning they developed remained fairly stable for centuries to come.

19 The Scottish universities were St Andrews (1413), Glasgow (1451), Aberdeen (1495), and Edinburgh (1583). Trinity College Dublin was founded in 1592.

20 Many of these foundation dates refer to the founding of the initial higher education institutions, such as colleges, which later became fully fledged universities. [explain difference in main text above]

21 In light of the current government plans to force all UK universities to run or sponsor secondary schools, it is worth remembering that both UCL and KCL did just this in the 1830s, to provide a pipeline of qualified students (Whyte 2015: 47). [With the creation of the over-arching University of London to award degrees for both colleges, the Home Secretary had power to directly alter the curriculum Whyte (2015: 49).]

22 For most of their history, universities were first and foremost institutions of instruction rather than research. The transition to seeing the production of new knowledge as an equally important role, via professors undertaking original research for publication, originated with the nineteenth century German model [suggested by Geiger 2015: 253; spread to US from 1830s: 256–257].

23 Kelly (1977: 18). In fact, there were fairly high levels of literacy much earlier than this – see Rose (2010) – but a national system of free primary education helped make this more consistent across different classes and regions.

for access to scholarship. The professionalisation of science around the turn of the twentieth century (Secord 2009; see also Chapter 1) also contributed to greater participation in scholarship beyond the traditional ‘gentleman-scholars’ who had previously dominated science, although the requirement of a university education may have had a negative impact on self-trained working-class scientists²⁴ (Rose 2010: 70–72). Access to reference materials through public libraries played an important supporting role in all of this – at least in the cities – particularly in expanding access to women, who had often been excluded from both universities and institutions designed for working men (Baggs 2004: 120; Rose 2010: 18–20, 76–77).

Victorian education reform took place in the context of Britain’s imperial ambitions. Perhaps even more so than public libraries, institutions of higher education were an integral part of the colonial project. Prior to this time, in the sixteenth and seventeenth centuries, as European colonists invaded the Americas they built colleges to spread Christian ideas, from those founded by Catholic orders across the region that would become Latin America to the puritan college of Harvard in New England (Wilder 2013: 18–23). According to Wilder, these institutions were more about the strategic value they conferred for political causes than any notion of ‘higher learning’ that later became synonymous with the modern university, and throughout the eighteenth century there was a close relationship between colleges and slave traders (Wilder 2013: 21, 47–77; Collini 2012: 23).²⁵ In the British empire, the Victorian period saw the creation and expansion of European-style higher education institutions throughout the settler colonies,²⁶ where ‘the creation of universities became an essential marker of colonial “development”, a means whereby colonies could assert their own maturing identities, expand their elites, and form the cadres’ of white British men who would run colonial institutions (MacKenzie 2013: vii). Initially set up, usually by religious denominations, ‘by self-confident settler elites who saw them as both symbols and disseminators of European civilisation in the colonies’, Pietsch has shown how deep networks of cultural and institutional relations connected settler universities with British academia (Pietsch 2013: 3–5). By introducing schemes such as travelling scholarships and leave-of-absence programmes, these institutional networks helped to forge strong ties between colonists and Britain, with the exclusionary nature of access to these networks cementing the power of white elites (Pietsch 2013: 39–55).

British education policy in the imperial colonies has been described by anti-colonial historian Rodney as ‘an instrument to serve the European capitalist class in its exploitation’ (Rodney

24 Pietsch tells us that ‘by the second half of the nineteenth century it was the credentials of universities and professional societies, rather than the word of gentleman amateurs, that served as the guarantors of reliable knowledge’ (Pietsch 2013: 62). The exclusionary nature of access to these institutions could have negatively affected the ability of working-class scientists to participate in professional activities.

25 [analysis – connection here with liberal project of domesticating radicalism in UK through education]

26 The term ‘settler colonies’ is used by Pietsch and MacKenzie in this book to refer to the Dominions of Canada, Australia, New Zealand, and South Africa rather than the British colonial territories elsewhere in Africa and Asia, in recognition of the way white settlers in these places saw themselves as a connected part of the British community.

1972: 264–265 [and Friere, Illich?]; see also Whitehead 2015 and 2015a for an overview of the topic from a conservative perspective). Colonial universities in India were founded in the 1850s by British officials as part of a ‘civilising’ project and for several decades staffed only by British-born teachers; throughout the British colonies, academic staff were – with some exceptions – almost exclusively white (Basu 1989: 167; Pietsch 2013: 70–72). So although the Victorian period saw rapid development in terms of institutional maturity, professionalisation, and increased numbers of students and academics, it remained an exclusive system beyond the reach of most people. It was in the twentieth century that barriers to access began to break down further and so the next section describes how a system of mass higher education came into being.

Mass higher education

Moving on from the above discussion about the formation of a modern higher education system, this section examines the subsequent development of *mass* higher education. Because higher education today is undoubtedly a mass phenomenon: on average, over 50% of the population undertake higher education in OECD and G20 nations, with 42% of 25-34 year olds educated to a tertiary level as of 2014 (OECD 2016: 324, 33).²⁷ It is only relatively recently that such a high proportion of people attend university, following explosive growth in student numbers in recent decades. As recently as 1950, only around 3% of the ‘traditional’ age cohort (18-21 years old) in the UK attended university (Whyte 2015: 205). By seeing how universities evolved from a small number of institutions with a strong religious bearing into the large international network which educates such a large proportion of the global population today, it is possible to see how the rapid expansion of access to higher education has brought an increasing number of people into contact with scholarship. The chronology of this section will skip back and forth²⁸ as class, race, and gender are each examined in turn with regards to the ability (or otherwise) of different demographics to participate in higher education. The discussion here is focused largely on quantitative indicators of access to higher education; see Chapter 5 (‘Neoliberal Higher Education’) for analysis of the changed nature of the university in the contemporary situation.

When considering how access to higher education has changed throughout history, the most obvious starting point is to look at the number of students as a proportion of the population. In England, university attendance rose during the sixteenth and seventeenth centuries to the point where 2.5% of 17-year-old men were in higher education, a level that was not to be surpassed until after the second world war (Stone 1964: 57). But by the early nineteenth century no further universities had been created and student numbers had fallen to less than 1% in England and around 2% in Scotland (Whyte 2015: 4). It was in the United States that a mass higher education system was first developed that was no longer the preserve of an elite

27 [update figures and reference in 2018]

28 [is this the best structure?]

(Geiger 2015: x, 428). In the late 18th century around 1% of college-age US white men²⁹ attended what Wilder has referred to as ‘the intellectual and cultural playgrounds of the plantation and merchant elite’ (Wilder 2013: 138), rising to 1.8% by 1860 (Geiger 2015: 76, 242). According to Geiger, the nineteenth century actually saw colleges become more elitist, and by the end of the century US higher education institutions were more socially exclusive than ever before (Geiger 2015: 225, 400–401). This soon changed however, with 5.5% of 18–21 year olds in higher education in 1915 and 15.5% in 1940, higher than any other nation at the time (Geiger 2015: 428). This was partly due to the increase in high school education – even if higher education institutions were technically open to all, people could only become college students if they had the necessary preparation (Geiger 2015: 429). In this way ‘mass higher education embraced unprecedented numbers of students, many from groups that had virtually no previous access to colleges’ (Geiger 2015: 444).

In the UK, steady growth in student numbers began after the First World War: in 1914, 1% of 18–21 year olds in England were in higher education, rising to 2% in 1938, 3% in 1948, 6% by the early 1950s, and 14% in 1970 (Robbins 1963: 11; Whyte 2015: 146, 205, 236). The biggest expansion of all occurred from 1988–96, and by 2007, 35% of 18–20 year olds attended (Boliver 2011: 231–32).³⁰ This growth in the number of students correlated with a growth in the number of universities. The fact that new civic universities (see above) were founded in the UK’s large cities of the North and Midlands helped diversify the student body; in the 1900s a majority of students in Bristol, Manchester, Leeds, and Liverpool were local, and this remained the case until the 1950s (Whyte 2015: 144, 205, 237). Civic universities remained, however, dominated by the middle classes (Whyte 2015: 205–6). Rising student numbers in the post-War period were partly driven by non-university enrolment, with more than half of these students at higher education institutions such as teaching training colleges and technical colleges (Whyte 2015: 235). However, this expansion did not bring a larger proportion of working-class students into universities, with little change from the 1920s to the 1990s (Boliver 2011; Whyte 2015: 239). Boliver argues that ‘inequalities of access to education are unlikely to decline simply as a result of expansion because those from more advantaged socioeconomic backgrounds are better placed to take up the new educational opportunities that expansion affords’ (2011: 230; see also Blanden & Machin 2004). In part the post-War expansion was driven by government objectives of producing a highly educated workforce to aid economic growth (Whyte 2015: 233). Class difference in ‘liberal education’ vs. training for job (Whyte 2015: 208–09). One function of universities has always been acting as a sort of finishing school for the elite to prepare them for high status roles in society.³¹ This is tied with overt political power: universities always tied up with national & government goals. In the UK, Cambridge and Oxford universities had their own MPs until 1950, as did

29 See below for discussion of race and gender discrimination in college admissions.

30 See Figure 1 in Boliver’s article (2011: 232) for a visualisation of the expansion that clearly shows two peaks in the 1960s and 1990s. [up to 49% now <https://www.theguardian.com/education/2017/sep/28/almost-half-of-all-young-people-in-england-go-on-to-higher-education>]

31 [citation needed]

civic universities after 1918 (Meisel 2011).³²

[By 1992, the differences between polytechnics and universities had diminished greatly.³³]

Higher education has often been restricted to people with certain social characteristics, particularly along racial, gender, and class lines.³⁴ In the pre-revolutionary United States, universities were deeply implicated in the slave trade, with northern slavetraders and wealthy southern slave owners funding northern colleges and enslaved people being used to build them and serve within them (Allen et al. 2006: 4–5, 12–15; Wilder 2013: 1–11). And this relationship was not only financial – college professors were the driving force in promoting racist ‘scientific’ theories of white supremacy (Wilder 2013: 211–239, 273). By the nineteenth century, colleges continued to only admit white students, and some southern colleges were overtly pro-slavery (Geiger 2015: 233).³⁵ At the time of the first experiments with mass higher education in the United States in the early twentieth century, racial segregation was still practised by colleges and universities in Southern states (Geiger 2015: 467–478).³⁶ The higher student numbers at this time led elite US institutions to restrict their intake, thus making them even more exclusive, and to discriminate against Jewish students (Geiger 2015: 449–453; Soares 2007: 23–27, 78–80). The opportunities for black students were slim in other regions of the world at this time as well; before the 1930s, there were only a handful of colleges in Africa and the Caribbean that offered high education for Africans (Pietsch 2013: 181).

Until the nineteenth century women were unable to obtain degrees. Women were admitted to Owens College (forerunner of the University of Manchester), Bristol, Royal Holloway, and Mason College Birmingham in the 1870s (Tylecote 1941: 9; Whyte 2015: 115, 121),³⁷ forty years after women were first admitted to higher education in the US (Geiger 2015: 206). University education was extended to women in British colonies around the same time (Pietsch 2013: 27). Since academic appointments required a university education, the percentage of academics who were women was similarly low – 1.5% in 1932 in Britain – and academic culture remained resolutely masculine (Perrone 1993; Pietsch 2013: 141). In the post-war period the demographics of the student population did eventually change, and by the early 1990s women made up over 50% of the student body in the UK (Whyte 2015: 292).

32 [more on this – analytical opportunity here]

33 [see Pratt (1992) *The Polytechnic Experiment*.] [ME: how did polytechnics become “like universities” and what does this mean?]

34 Although ‘the early sources never mention entrance exams or other criteria of admission’ (Pedersen 1997: 213), access to the ancient European universities was restricted to people who were Christian, male, and already fluent in both spoken and written Latin (Pedersen 1997: 214). Although free church-funded schooling (including Latin instruction) meant that it was not exclusively the higher classes who were able to educate their children, in practice few working class students were able to progress to university. In light of early twenty-first century debates around loans versus grants it is striking that examples of both funding methods were already in existence by the thirteenth century (albeit from private/ecclesiastical sources rather than the state), but most university students relied on family wealth to support their living expenses while studying (Pedersen 1997: 218–220).

35 [interesting that you mention a set of characteristics that are now defined as “protected” under UK anti-discrimination legislation. Worth drawing upon UN declarations on rights to education here, also?]

36 Public libraries were also segregated (Geiger 2015: 112).

37 See Dyhouse (1995) *No Distinction of Sex? Women in British Universities, 1870-1939* and (2006) *Students: A Gendered History*.

From the Humboldt model in Germany, to the spread of new European models to US, and the civic universities in UK, a particular image of the university spread out to the rest of the world during the long nineteenth century. The global expansion of higher education was driven to some extent by colonial ambitions – the number of universities grew more quickly in the British colonies than in Britain itself (Whyte 2015). After the Second World War, in the period of decolonisation, newly independent nations saw ‘universities as powerful organs for the formation of identity and the projection of power’, increasing the amount of universities, student places, and research funding and student places (Pietsch 2013: 192). This was the beginning of a period when the expansion of mass higher education described above also occurred across much of the world. As of 2015, in OECD countries the proportion of 25-64 year-olds with tertiary education is 35% whereas for 25-34 year-olds it is 42% (OECD 2016: 36), which shows the continuing growth in attendance among young people. This is not evenly distributed across different countries, however, with rates for 25-34 year-olds at 11% in Indonesia, 14% in South Africa, 16% in Brazil, and 18% in China – compared to a high of 69% in South Korea (OECD 2016: 44).³⁸ The overall trend of these rates increasing is near universal, such as the proportion of the population aged 25 years and older in India who have a Bachelor’s degree rising from 2.5% in 1981 to 9% in 2011 (UNESCO [n.d.]).³⁹

This section has of necessity omitted many important aspects of higher education, not least the introduction of and distance learning, pioneered by the Open University (see Weinbren 2014) and now often provided online.⁴⁰ It is not possible to cover the topic in more detail here given the scope of this thesis. Nevertheless, it is clear that the expansion of participation in higher education has brought an increasing number of people into contact with scholarship. In the final section, I will return to the role of public libraries in mediating the public reception of research, and bring the discussion up to date by looking at how open access relates to this.

Access to research in the contemporary public library

Information access is only one of the functions of public libraries – Wiegand, for instance, argues forcefully that acting as a social place within the community and developing a love of reading are at least as important (Wiegand 2015: 1–6) – but nevertheless, they have played an essential role in facilitating access to information of all kinds, including scholarly research. The changes undergone in academic publishing over the past few decades (see Chapter 1) may have had a more obvious effect on *academic* libraries, but public libraries should not be forgotten when considering the impact of these changes on the reception of research.

Librarians can be seen as both facilitators of access to information but also as gatekeepers,⁴¹ a

38 Due to variations in the availability of statistics for each country, the data in the OECD report is not all from the same year.

39 [similar for other countries?]

40 [I will say more about this somewhere in the thesis, though not necessarily here.]

41 [how so?]

dual role that highlights a tension within the profession's ethics. In some ways the need to directly mediate between library users and their materials has been reduced over time through both social and technological advances. For instance, the term 'open access' was originally used to refer to print materials held on open shelves rather than in closed stacks, a practice which was unknown in the early days of public libraries (Kelly 1977: 176–182) and after being introduced in the US from the 1890s (Wiegand 2015: 79–81) it only became widespread in the UK following the First World War (Black 2000: 52). To take a more recent example, if a library now provides an electronic version of a text then the user may be able to access it without physically going to the library. In both of these examples library workers are still facilitating access but their role is less obvious to the end user and so the necessity of librarians' labour is obscured. Unfortunately, the fact that labour is often hidden has resulted in calls from the libertarian right to end public library services due to ill-conceived notions that librarians have already been automated out and libraries are obsolete (the 'everything is online now' fallacy – see Butler 2015, Worstall 2016). In reality, public libraries continue to be an important source of information provision for citizens, and the UK's open access policy recognises this.

Public libraries have always had to be responsive to the political context of the time. For example, in the UK under New Labour social inclusion became an explicit part of library policy (DCMS 1999; McMenemy 2009: 6),⁴² whereas the later 2010-15 coalition government cut local government spending to such an extent that many councils closed libraries in response (BBC 2016). Such an engagement with the policy direction of particular governments is also very clear with regards to open access. A central rationale for open access is that not all users (or potential users) of academic research are within the academy and research could have greater impact if results are made more widely available. The composition of publics outside of the academy varies at any given time but includes teachers, further education students, retired academics, industry and entrepreneurs, refugees,⁴³ and 'para-academic' or contingent academic labour without a permanent faculty position. The UK government has made open access a priority in order to tap into the unlocked economic potential of these publics – especially startups and entrepreneurs. The notion that public libraries could provide scientific and technical knowledge in order to drive innovation and therefore stimulate economic growth is an old one. Although in the late nineteenth century public libraries' provision of technical literature was patchy (Kelly 1977: 77–78), by the First World War they were seen as supporting economic activity around scientific and technical progress, leading to the development of numerous commercial and technical libraries (Black 2000: 13–14, 28–29; Kelly 1977: 243–244).

A similar supporting role for public libraries was envisaged by David Willetts, the former

42 See also Muddiman et al. (2000) who questioned the efficacy of this policy.

43 An often overlooked point, but many refugees are university students or graduates (Magaziner 2015; Parr 2016). With close to 1% of the global population now displaced (Jones 2016) – there are an estimated 65.3 million refugees (UNHCR 2016) out of a global population of 7.4 billion (Worldometers 2016), i.e. 0.8% of people – access to education and research for refugees has become a major global issue.

Minister for Universities and Science (2010-14), who initiated the UK's current national open access policy direction (see Chapter 6). After 150 years of expanding access to knowledge through public libraries, using them to increase access to online research can be seen as a logical expansion and resulted in the UK's free access⁴⁴ service, 'Access to Research' (Access to Research [n.d.]; Faulder & Cha 2014). The scheme provides free access to online journal articles from public library computers. This is an exception to most UK open access policy in that it focuses on end users rather than the supply side, i.e. academia. It has so far not been a runaway success – figures from the initial 19-month pilot period of the service showed a wide variance in usage between different library authorities, with some seeing no usage at all, and the national total of 89,869 searches from 34,276 user sessions during the period translates as only 1,800 users per month (Shared Intelligence 2015: 15–19). The Shared Intelligence report treats this as successful, but 1,800 out of a population of 65 million is extremely low. Furthermore, the Access to Research scheme is taking place concurrently with an unprecedented level of budgetary cuts to public library provision in the UK, alongside ongoing commercialisation and de-professionalisation which threaten[s] to reduce the ability of public libraries to function as a 'public sphere'. Walk-in access to research is of no value to citizens whose library has been closed.

Conclusion

From the creation of public libraries, the expansion of higher education, to the global adoption of the internet, a shifting distribution of power⁴⁵ has put more information in the hands of more people. Open access to research in the digital era is part of this longer history of access to knowledge. But if the decisions governing open access policy are subject to whims of temporary administrations, then nothing is inevitable about the success or otherwise of open access – rights obtained after a long struggle can always be rolled back. Despite all the gains made so far,⁴⁶ not everyone has equal access to knowledge: money and social advantage are still barriers to accessing the results of scholarship, let alone participating in its creation. The extent of academic piracy highlights the uneven geographical distribution of access to research: pirate websites such as Sci-Hub and Library Genesis show great demand in majority-world nations such as Indonesia and Iran.⁴⁷ This indicates that there is still much work to be done. Throughout history, progress in this area has often followed on the heels of grassroots or illicit activity. For example, although nineteenth-century public libraries resulted from top-down work of social reformers rather than bottom-up demand, they entered a world already containing a rich variety of autonomous working-class libraries. And piracy is often a

44 I use the phrase 'free access' here rather than open access because standard definitions of open access require some form of open licensing in order to count as full open access (see Introduction), rather than the temporary access granted through the Access to Research scheme.

45 [this is the narrative thread of the analysis in this chapter – needs developing]

46 For data on the growth of open access see Archambault et al. (2014) and Ware & Mabe (2015: 88–112).

47 See Bodó (2014; 2014a) on 'shadow libraries', the geographical distribution of their users, and the historical reasons why Russia is the centre of much academic piracy. High income nations do also have significant use of pirate websites though, as analysis of Sci-Hub usage data has made clear (Bohannon 2016; Greshake 2016).

precursor to the implementation of legal solutions (Johns 2009). Those researchers and activists who see open access as a progressive catalyst for social change can learn much from paying attention to the lessons of history, particularly its social and political dimensions. The trade-off between access and agency seen in the creation of public libraries that supplanted home-grown efforts has resonance with regards to current debates surrounding open access in the context of North-South relations: the ‘missionary’ aspect of the UK’s early public library provision, whereby wealthy philanthropists bestowed gifts upon the poor, is in danger of being replicated in the approach of some open access advocates in the global North. Taking care to foster relationships of mutual co-operation may go some way to avoiding this.

In the next chapter, the concept of *openness* will be explored in depth to show how the affordances of digital technologies can be combined with a desire for a more equitable system of access to knowledge.

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