Queen Victoria has been described as the ‘first media monarch’.¹ It is a term that demands some explanation, for it depends on understanding how print and visual culture changed during her reign, and how the cheap illustrated pamphlets, journals and newspapers, the invention of photography and its application in large-scale markets, faster means of communication like the telegraph, and new, faster and more convenient means of travel, all contributed to the creation and manipulation of images of the monarch, her consort and her family.² In simple terms, she was by no means the first media monarch. Since ancient times, rulers have depended on whatever media are available to them. ‘Whose is this image and superscription?’ asked Jesus, knowing that the coin shown to him by the Pharisees depicted Caesar.³ Thanks to the printing press and to the programmes of painters such as Holbein and Isaac Oliver and their copyists, representations of Henry VIII and Elizabeth I linked royal power with personal likenesses of a detail and on a scale unavailable previously. George III became more familiar to his subjects than any of his predecessors thanks to the hand-coloured etchings of James Gillray, sold for the high price of half a crown each and displayed for public amusement in shop windows. The matrimonial and other adventures of the Prince of Wales, later George IV, were depicted with yet more freedom.⁴ Gillray showed how it was possible to intrude into royalty, and thus began a debate that continues today: it concerned not just appearance and representation, but also a myth that

¹ Plunkett, Queen Victoria, first media monarch. For further aspects, see Richards, The commodity culture of Victorian England, ch. 2, ‘The image of Victoria in the year of jubilee’.
² Tritton, The lost voice of Queen Victoria.
⁴ In a substantial literature, see more generally the recent collection Gaechtgen and Hochner (eds.), L’image du roi; Strong, The cult of Elizabeth; for Britain, see for example Lloyd and Thurley, Henry VIII; for Gillray and Carlton House, see Hill, Mr. Gillray the caricaturist, pp. 118–23. But see Anglo, Images of Tudor kingship for important distinctions between public and private circulation and sharing of images.
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depended on a carefully modulated sense of distance, a topic that is not part of this book. In more limited terms, while (to repeat) Victoria was certainly not the first media monarch, she was nonetheless in her turn exploited and presented to her subjects and other audiences with the latest available technology. Just as earlier generations had used woodcuts, new artistic techniques, engravings and lithographs, so photography and new printing opportunities were used for Victoria. In this way she stands centre-stage in the history of the book.

To compare a book published in 1830 with one published in 1914 is not just to place an article that was largely hand-made next to one that was almost completely the product of a machine. Just as in 1830 there were many books printed on machine-made paper, and printed by steam presses, so in 1914 there were still a few that were printed by hand, on hand-made paper. Some of the most important changes in the means of manufacturing books had been invented long before 1830. The first paper-making machine in England was installed at Frogmore, Hertfordshire, in 1803, and the first book to be printed on machine-made paper was published in 1804. The first Stanhope iron printing press was introduced to the world in probably 1800, and within five years printers were installing the latest models. The introduction of stereotyped plates in place of loose type for some printing made possible the success of the British and Foreign Bible Society’s programme for mass circulation of the scriptures.\(^5\) In 1814 *The Times* installed its first steam-driven press. These various building-blocks of printing technology did not in themselves amount to an industrial revolution. As in other industries, there was a world of difference between invention and development, and widespread acceptance and application. None of the changes was accomplished without disappointments and setbacks. Labour skills and practices, decisions on capital investment, equipment manufacture and customer acceptance all contributed to a process that was drawn-out, where some developments were accepted more quickly than others.

Most printers did not need steam presses in 1830: the print-runs for most books did not justify the expenditure.\(^6\) Newspapers were another matter, though the dozens of titles whose circulations were counted in little more than hundreds continued to be printed on large iron hand-presses. In the mid-1830s *The Times* had a circulation of about 9,800 copies, a figure that was to triple in the next ten years. Its competitors were the *Morning Chronicle* and the

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\(^6\) Weedon, *Victorian publishing*, pp. 70–1.
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Morning Herald, each with about 6,200. It was not surprising that metropolitan newspapers led the way in innovation. Though the technology existed, and was developed in America, rotary printing was introduced tardily in Britain. For many years, the rolls of paper produced by the new paper-making machines had all to be cut into sheets for printing. The Times, which had replaced the old Koenig steam press of 1814 with Applegath & Cowper presses in 1828, and then installed Applegath’s rotary machinery in 1848, before turning to a mixture of Applegath vertical machines and Hoe’s horizontal presses in 1858, installed a web-fed machine only in 1868. This technology remained in use until 1895. From 1909, the press-room was equipped with electrical Goss rotary presses, which not only were easier to operate, but also had much faster folding machines at the delivery end. By itself, speed of printing was not necessarily a help if other activities could not keep up.8

Typesetting and type design

In two areas of book manufacture, typesetting and bookbinding, hand methods remained for much longer. In typesetting, the first attempts at meeting demands for faster work had been made in the 1780s, when John Walter introduced a process that he called logography. This was not a mechanical development, but one in typefoundling, where dozens of common letter-sequences were cast as single sorts. It was cumbersome, and was never significantly faster than a good trained compositor using the old methods. It was adopted by the Daily Universal Register (later The Times) in 1785, but was abandoned in February 1792.9 William Church, an American from Vermont who also worked in London and Birmingham, seems to have been the first to realise that for machine-setting to be possible it would be more efficient to cast type new each time.10 But it was only in 1840 that a patent was taken out by James Young and Adrien Delcambre for a machine that was commercially adopted. With the help of Henry Bessemer (better known for his invention of the Bessemer steel converter) they developed the ‘Pianotyp’. Though used to set the Family

7 Moran, Printing presses, chs. 12–13; Silver, ‘Efficiency improved’. For further details of machines, see Wilson and Grey, A practical treatise upon modern printing machinery. For taxes, see Dagnall, The taxation of paper in Great Britain, 1643–1861, and for the wider background see Daunton, Trusting Leviathan.
8 The Times printing number (1912), p. 130. The Daily Mirror was the first newspaper in Britain to be printed on Goss machines, in 1905.
10 For the manufacture of printing type, see James Mosley in the Cambridge history of the book in Britain 5.
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_Herald_ in 1842 it enjoyed little success; and only with an invention by Robert Hattersley, an engineer in Manchester, were real advances made. Hattersley’s machine, patented in 1857, was (unlike the Pianotyp) operated by one man, who pressed a key to obtain a particular sort. It was primitive, simple, and required no power. His work featured in the Great Exhibition in 1862. But it was said that a fast compositor could work as well; and some printers found the machine itself was unreliable. The two examples installed in the _Eastern Morning News_ in Hull in 1866, for example, were sold off to a London book printer – for whom, presumably, time was of less essence.¹¹ The Kastenbein machine, patented in 1869, was quicker, and was installed in _The Times_ in 1870, where it remained in use until Monotype keyboards and casters were installed in 1908–9. There were dozens of other ideas and machines, all searching for faster setting. The problem was obvious enough, and inventors were not wanting. But, so far as the printing industry was concerned, until its final decade the nineteenth century was a century of experiment rather than achievement in typesetting.¹²

Most machines, both those that found some success and those that quickly sank forgotten, depended on a supply of already cast type, delivered by gravity. It was the realisation that type could be cast anew each time, from matrices supplied with the machine, that eventually led to the revolution that had been so long sought. The first Linotype machine, invented by Ottmar Mergenthaler, was used to set part of the _New York Tribune_ in 1886. His machine produced slugs, cast lines of type. Having undergone several modifications (the problem of spacing and justification proved particularly difficult), by 1892 the first machines for British customers were delivered by the English Linotype Company to the _Leeds Mercury_, the _Sheffield Telegraph_ and the _Newcastle Evening Chronicle_ – all outside London. The company was heavily advertised, partly with full-pages on the back of the _Financial Times_ and partly with carefully placed stories. By 1901 Linotype setting was in use in a dozen London newspapers and well over two hundred in the suburbs and provinces.¹³

Mergenthaler was the first person to create a machine that proved a complete success, demonstrated in its use over most of the following century. The

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¹¹ Hunt, _Then and now_, pp. 175–6.


¹³ _List of some newspapers and other publications in Great Britain set by the Linotype Company machine_ (1901); Kahan, _Ottmar Mergenthaler_. The exact dates of the introduction of Linotype setting to individual newspapers have apparently still to be established.
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Monotype machine, likewise developed in America, was based on a quite different principle. Where the Linotype depended on matrices that, once used, were returned to their place to be used again, each character thus requiring several duplicate matrices, the Monotype contained just a single matrix case. Instead of slugs of type, each sort was cast individually, a principle that made correction much easier since it could be done by hand. Most obviously, the Monotype was made up of two distinct parts, a keyboard, on which the operator produced a punched paper tape, and a caster, driven by this paper tape. The first patent for what developed into the equipment that was to dominate book composition in Britain was granted in 1887; but it was only in 1898 that the first model was put on the market, in America. The first machine to be installed in a British printing house was bought by Wyman in 1898, and was a primitive affair; in 1900 the much superior model, redesigned in 1899, was installed by Cassells.14

These machines were not always immediately and unreservedly welcomed by either compositors or the reading public. At first, John Southward, one of the most respected of trade printers and a supporter of the older Thorne typesetter, wrote of the Linotype as a machine ‘of the past’.15 But the writer in the Daily Mail in 1897 surely had his tongue partly in his cheek when he wrote of having seen a demonstration of the Monotype keyboard and caster, the latter ‘the most appalling machine in the whole range of demonology’. What had been described to him as a kind of Linotype, whose drowsy hum he could hear overhead in his office, proved to be quite different:

a thing having all the outward seeming of a machine. It was mounted on a pedestal, an awe-inspiring complication of wheels and levers and cogs and cranks and belts and springs and ratchets and plungers and legs and teeth and taps and handles and grippers and pins, with an uncanny looking chimney rising out of the middle of it like a ventilating shaft from the brimstone furnace.16

Nothing was said of the most noticeable feature of all when the caster was at work, its deafening noise. Readers of the Daily Mail had nothing to fear other than a machine that set type ‘without any show of human assistance’ – an achievement, as the report said, ‘quite outside human imagining’. To a generation whose fathers had become attuned to the noise and dirt of the steam engine, and that was now witnessing the daily effects of electricity and the internal combustion engine, the Monotype machine was, in truth, little

more than yet another modern novelty. For the Daily Mail’s million and more readers it made good copy. For the printing and publishing industries it was the answer that dozens of inventors had sought. But in hundreds of smaller printing houses hand-setting remained dominant for several years more. In 1900 there were just twenty-two Monotype machines in Britain. They not only required capital investment, and further running costs. They also needed operators of greater skill than many compositors. Training costs always had to be added as well.\textsuperscript{17}

On the one hand, printing became ever more industrialised. On the other, it moved out of the printing house and into the non-specialist world of the office and the study. The first typewriter, termed a typographer, was patented in the United States in 1829 by William Austen Burt, in the back-woods of Michigan. His invention was followed by those of many others, all seeking to improve methods of mechanical reproduction, but it was not until 1873 that the firm of Remington began to market commercially produced machines. The first models produced only capitals. ‘I think you will be surprised by the manner of this letter’, wrote a correspondent in Utica to a colleague in Cambridge, England. ‘It is put in print by one of the latest inventions of some Yankee, who writing, I suppose, an illegible hand, or at least knowing that some of his countrymen did, concluded to put an end to that difficulty for ever.’\textsuperscript{18} Manufacture was dominated by American firms until the twentieth century, and when in 1908 the Imperial Typewriter Company was established in Leicester, it was by an American named Hildago Moya. In Dresden, the engineering firm of Seidel & Naumann manufactured bicycles before they turned their attention in 1892 to typewriters. Their first machines appeared in 1900, and by 1910 the first portable ‘Erika’ machines were on the market. By then, the typewriter had long ceased to be solely a machine designed for the office. Professional authors on both sides of the Atlantic were being encouraged to use them. In 1896, contributors to the new journal The Savoy, published by Leonard Smithers, were instructed only to submit their work in typescript.\textsuperscript{19}

Writing had become mechanised, and with it came advantages in reproducing copies in office or amateur environments. The copying book, with its accompanying damping equipment and iron copying press, was familiar. Where multiple copies were needed there were table-top lithographic presses,
and an abundance of patent systems designed for, in effect, short-run printing. Waterlow & Sons, among the largest of the manufacturing stationers, claimed in 1882 to have sold 2,000 table-top lithographic presses (‘every person may become his own printer’), to government offices, railway companies, banks, missionary societies and a prison. Prices started at seven guineas, compared with the same firm’s Multiplex Copying Portfolio, which by means of a special transfer paper could produce forty or fifty copies, with the price of the basic equipment starting at 15s 6d and with the assurance ‘the process being so simple that it may be done by a boy’.20

In reading, as in many human occupations, the most successful innovations are those which are least noticed. For printers, and hence for their customers, the advent of machinery that could, by proper management, keep costs down and drive production up was in principle much to be welcomed. But it depended on reader, or customer, acceptance. Few inventions in the printing and related industries have been immediately taken up and applied by numerous manufacturers. This was not simply a result of patent limitations. Nor was it wholly a result of capital costs, though this was certainly a major consideration in the replacement of machinery by its next generation. Book typography, with its demands quite unlike the attention-grabbing needs of publicity-printing, had most often to assume deeply conservative expectations and requirements. As a consequence, the revolutionary mechanical innovations of the Linotype and the Monotype were not matched at first by any change in type design other than what was required of the machine’s mechanisms—changes too subtle to be noticed by most readers.

Type design looks constantly over its shoulder. At one level this was, and is, a straightforward characteristic of the necessary conventions of the alphabet. At another, it invited comparison and competition. Most obviously, a zest in the nineteenth century for decorative type led to what were, in the eyes of some of the more critical observers, weaknesses. ‘Herod is out-heroded every week in some new fancy which calls itself a letter, and which, in response to a voracious demand, pours into our market, either from native foundries or from the more versatile and supple contortionists of America and Germany.’ The typefounder and historian of his trade Talbot Baines Reed, who addressed these words to the Society of Arts in 1890, took as his theme the relationship of new to old fashions in typography, from the fifteenth century onwards. He made plain his admiration for Caslon’s work in the eighteenth century; and though he did not

20 Waterlow & Sons Limited, catalogue, February 1882. More generally, see Rhodes and Streeter, Before photocopying.
name his competitors in typefounding (most obviously Miller & Richard, whose reintroduction in 1860 of old-style type based on Caslon’s models proved to be a turning-point), he clearly regarded the renaissance as welcome. ‘The typography of the last half century owes a great deal to this opportune return to the past; and the continued favour of the old styles, I venture to think, is a hopeful sign for the future.’ He also singled out for approval what he identified as a ‘Basle’ style, characterised partly by the thicker sides of the letter ‘o’ being set at an angle rather than vertically. The styles developed from Bodoni and Didot, with their sharp contrasts between thick and thin lines, and the tendency to carry these to extremes was to him much less welcome. As a typefounder, he remarked on the harder metal introduced for typefounding in order to meet the demands of machine presses. This also made ever finer lines possible. In his view, Scottish founders in particular had pursued this particular course, following Didot rather than the rounder forms of the English tradition. Not least importantly, the narrowness of letter possible with modern faces had more than visual implications. Since compositors were paid by the en, that is, the length of text that they set, their tariff exercised its own influence on type design. In a part of book production where costs were otherwise difficult to control, there was a direct correlation between type design and labour costs in setting.21

In two areas, Reed looked forward. First, he was one of the earliest people in England to pay serious public attention to the work done by the French ophthalmologist Emile Javal, who in 1881 had published a pioneering paper on legibility.22 Some of Javal’s observations and theories were later to be widely challenged, but they were the real beginning of a new field of study that was to influence all aspects of type design. In Britain, they were introduced to a much wider audience through a textbook by Edmund Burke Huey, of Pittsburgh, *The psychology and pedagogy of reading*. First published in 1908, by 1910 this was in its fourth printing. Of especial concern was the market for schools, and the sizes and designs of type appropriate for readers in their first years; Huey’s was just one voice calling for government intervention. By 1910, publishers neglected the subject and its implications at their peril, as local education authorities began to take account of regulations issued by the Board of Education calling attention to the need for suitable-sized type in textbooks. As was quickly realised, it was a question not only of type size, but also of its character, of paper, of the weight of illustration, of the presentation

21 Reed, ‘Old and new fashions in typography’.
22 Javal, ‘L’évolution de la typographie considérée dans ses rapports avec l’hygiène de la vue’; see also his *Physiologie de la lecture et de l’écriture*.

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of cartographic information in atlases, of the printing of music – all related to such questions as lighting, myopia and changes in children’s eyesight as they grew up. In 1912 the British Association received a report from a committee which had taken evidence from J. H. Mason, one of the most respected printers of his generation and a keen advocate of old-face type with its less sharp contrasts between thick and thin lines that most readily characterised modern faces. The committee not only recommended greater attention to design in the selection of textbooks, but even observed that a standard should be introduced – such a standard rendering unprofitable any books which did not reach it.\(^{23}\)

More obvious to most people, since it affected the look of books much more dramatically, were the implications of Reed’s closing words of his paper:

> I take it as a hopeful sign that the aesthetics of typography are at present being studied by men of artistic taste and authority. The result cannot fail to be of benefit. For printing, in all its career, has followed close in the wake of its sister arts.

The reference to William Morris, and others like C. R. Ashbee and Charles Ricketts, could hardly have been clearer. The foundation of the Arts and Crafts Exhibition Society in 1887 brought together a group including Morris, Walter Crane, Emery Walker, Selwyn Image and Reginald Blomfield (fig. 1.1). Only Morris could exhibit the range of experience in design in such a range of media – stained glass, wallpaper, tapestry and furniture, quite apart from calligraphy and printing types. He established the Kelmscott Press in 1891, after several experiments in the publication of his work, some involving the publishers Reeves & Turner and, as printers, the Chiswick Press. In the course of these, he had acquired a taste for a revival of the sixteenth-century Basle type, cut by William Howard in the 1850s. Reed knew the photographic enlargements of early type that had been prepared by Emery Walker in 1888 for what proved to be a seminal lecture to the Arts and Crafts Exhibition Society, one of the formative moments leading to Morris’s decision to establish his own press; and he knew also of Walker’s work with Morris in the preparation of his own type designs.\(^{24}\)

Morris’s chosen medium, possible because he was master of his own press, was deliberately anomalous. By using iron hand-presses rather than machine presses he demonstrated the importance of the skilled workman having as

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23 ‘School-books and eyesight; report of the committee’.
24 Dreyfus, ‘Emery Walker’s 1888 lecture on “letterpress printing”: a reconstruction and a reconsideration’. Walker’s copies of slides of early books made to help Morris, and given to Reed, are now in the St Bride Printing Library, and others are in the Emery Walker collection at Cheltenham Art Gallery. See also Peterson, *A bibliography of the Kelmscott Press and Morris, The ideal book*. 
Figure 1.1 Prospectus for Walter Crane, *Of the decorative illustration of books old and new* (George Bell & Sons, 1896). The book was published in two forms: ordinary copies at 10s 6d and a hundred copies on tall Japanese vellum at 25s, twenty-five of the latter being reserved for America. (Private collection)

complete control as possible over his task. He worked with paper-makers to obtain hand-made paper of the highest quality appropriate to take type and blocks printed by letterpress, and with ink-makers to obtain ink of the blackest and of sufficient stiffness. But, while this was of the essence in the arts and
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crafts movement, there was also a practicality about all that Morris strove for in the Kelmscott Press. When appropriate, he was perfectly content to use modern methods involving photography. Some of its books were expensive: the Kelmscott Chaucer, published in 1896, cost £20. Most were more modestly priced: Maud, printed for Macmillan, cost two guineas and the three-volume Golden legend (1892) was underpriced at five guineas. Morris had been interested in the appearance and design of books long before he founded the Kelmscott Press, and in the 1860s had thought with Burne-Jones of producing an edition of his Earthly paradise in which text and illustration would be integrated. In his own press, he was able to demonstrate principles to the printing and publishing trades, as well as to readers. His insistence on the importance of materials – paper and ink – was a lesson of which much of the trade stood in need. In rejecting the commercially available types, he demonstrated in his own way an important principle: how older typefaces could be adapted to modern needs. With the help of photographic enlargements, and encouraged and guided by Emery Walker, Morris turned to fifteenth-century Venice.25 The results, perhaps inevitably, were archaic – distractingly so for many people who looked at his books and could see no further than their appeal to medievalism. Inspired by a mixture of fifteenth-century printing and medieval illuminated manuscripts, his page designs were as perplexing to some people as they were attractive to others. In his disciplined insistence on the importance of not mixing different families of typefaces within a volume, in his return to what he considered the best of the older traditions, in his attention to his materials, especially paper and ink, and in ensuring a visual balance between illustrations and areas of text, Morris set out a manifesto that challenged widely held assumptions and practices in book design and production.

The line of descent that can be traced from Morris and his advisers to dominating tastes in much twentieth-century typography is a strong one. When T. J. Cobden-Sanderson, in partnership with Walker, established the Doves Press in 1901, the two men took a different typographical route.26 They chose as their models the roman types of Nicolas Jenson and Jacobus Rubeus in fifteenth-century Venice. Walker’s analysis of early types underpinned the designs used for both presses, and the results could hardly have been more different visually; but the historical principles were the same.

There were others at work as well. The Printer’s International Specimen Exchange, founded by the antiquarian Andrew Tuer in 1880 and then gradually

displaced by the British Printer founded in 1888, demonstrated some of the fer-
ment among printers who took the design of their work seriously, who were
anxious to experiment but who were also anxious for the judgements of their
peers.27 In books such as Hardy’s Tess of the D’Urbervilles (R. & R. Clark for
Osgood McIlvaine, 1889, designed by Charles Ricketts), Whistler’s The gentle
art of making enemies (1890: the Ballantyne Press for Heinemann) and Oliver
Wendell Holmes’s The autocrat of the breakfast table (Walter Scott, c.1897),
printers and publishers attempted with more or less success to break away
from some of the conventions of centred typography. Though the fluid lines of
art nouveau never quite achieved the same widespread presence in book design
in Britain as they did in Belgium or the Netherlands, some of the same ideas
were to be seen in so-called artistic printing. Seeming to defy requirements
to use types in harmony with each other, and to defy the ordinary standards
of letter design, and setting colours in unexpected contrasts, the roots of this
were to be found in the early years of the nineteenth century. In hindsight, it
was looked on by some as deliberate indiscipline. And so it was, in many hands.
In the work of Charles Ricketts, Aubrey Beardsley, Jessie M. King and their
imitators and contemporaries, Britain found its own versions of art nouveau, a
tradition made demotic in the designs for the title-pages and endpapers of the
volumes in Dent’s Everyman’s Library.28

Stereotyping

Stereotyping, where metal plates were cast from set pages of type, proved itself
within less than a decade after its introduction at the university presses in both
Oxford and Cambridge, and at the press of Andrew Wilson in London. But it
was better suited to some books than others, depending on patterns of market
demand, and its efficiency was still a matter of intense debate among printers
and publishers in the 1820s.29

The process not only brought economic benefits to reprints, and to the
possibilities it offered for simultaneous printing of the same setting of type
on different machines. It also made possible new structures in printing and
publishing. Sets of plates for a book that were worn, and of editions in which
printer or publisher had no further interest, could be auctioned off to others
who were less concerned about the sharpness of the plates, and who would

27 Hudson, 'Artistic printing: a re-evaluation'.
28 The turn of the century, 1885–1910; Taylor, The art nouveau book in Britain, interprets the term more
widely.
29 Hansard, Typographia.
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print them for lower-priced editions. Plates could also be sold overseas, on the same principle, or could be made and sold new. Charles Knight claimed to have sold stereotype casts of his best woodcuts originally prepared for the *Penny Magazine* to Germany, Holland, France, Livonia (Russian and German), Bohemia, Italy, the Ionian islands, Sweden, Norway and Spanish America. The whole journal was reprinted in the United States from plates sent over from Britain. Using the same methods, the first years of *Punch* were reprinted to meet later demand. It was the same, and on a far greater extent, for reprints of works on smaller scales, the hundreds of novels, books of poetry, domestic manuals and schoolbooks that made up the bulk of the book trade. At the beginning of the century the early exponents of stereotyping had discovered that it was economical to print comparatively small numbers of copies, and often — thereby lessening the risk of over-exposure to a sometimes fickle trade. While it was much used for large editions, it was also of value in printing books that had a steady sale. A few hundred copies could be printed as needed, and the market fed without the need for surges in investment in paper, or for large quantities of books to be warehoused. This remained true; but the real power and value of stereotyping, which had been widely regarded with such suspicion in the 1810s and 1820s, was proved when stereotypes and the harder electrotypes were worked to their limits in order to meet demands from a reading public used to the idea of cheap books.

Illustration

The illustration of books is studied further in chapter 2 below. To the casual observer, no aspects of printing were more obvious than the change from line to half-tone, and the change from monochrome to colour. Early aniline inks tended to be too fugitive for ordinary printing, but there were plenty of other experiments to improve and develop printing ink. Prior to 1850 there had been only four patents for inks for printing and other miscellaneous purposes. Between 1850 and 1880 there were almost a hundred, and in the next thirty years the number was greater still. Methods of block-making and of printing attracted even more experiment. By 1830, lithography was well established. As a means of scientific illustration its flexibility and cheapness in showing shading or colour made it attractive until well into the twentieth century: in 1913 Cambridge University Press took over a local business that specialised in

30 See below, chapter 20.
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this form of work, and only closed the department in the 1920s. Lithography proved also to be ideally suited to the increasingly flexible page-design of children’s books. But it was never ubiquitous. The coloured illustrations of the Kate Greenaway picture books, printed by Edmund Evans in the 1880s and 1890s, were printed from woodcuts, in three or four colours using cross-hatching as a further aid to achieving different shades. The watercolours in Beatrix Potter’s Peter Rabbit books, published by Warne, were printed in three colours from letterpress half-tones.

In the 1830s, most illustrations for ordinary trade books depended on wood- or steel-engraving, two very different processes despite the similarity in the terminology. One was letterpress, having its origins in the fifteenth century and brought to a pitch of achievement in the work of Thomas Bewick in Newcastle upon Tyne at the end of the eighteenth century. Unlike the older woodcuts, which were cut with a knife on the side of the plank, wood-engraving was customarily executed with a graver on the end of specially prepared box-wood, a hard surface whose close grain made it ideally suited to detailed work. Either the artist drew directly onto the block, or the engraver copied a drawing. The demand not just for more, or better, illustrations was felt throughout the printing trade. The 1846 Post Office Directory recorded Jabez Hare, a commercial wood-engraver, as ‘engineering & perspective draftsman & wood engraver, &c.’ – a reminder of how much was commonly left to the engraver. Collaborations between wood-engravers and named artists were rare before the mid-century, and much more work was required for everyday advertising, guidebooks, catalogues of machinery and similar commercial purposes than was needed for literature. Increasing emphasis on this collaboration, and the improved status of the artist as illustrator, brought new tensions. The translation from drawing to cut lines in wood demanded considerable interpretation by the engraver, and some authors or artists could be particularly demanding at this stage: Lewis Carroll (C. L. Dodgson) and Dante Gabriel Rossetti are celebrated examples.

O woodman, spare that block,
O gash not anyhow;
It took ten days by clock,
I’d fain protect it now.

Chorus, wild laughter from Dalziel’s workshop.

33 Kiger (ed.), Kate Greenaway.
34 Linder, A history of the writings of Beatrix Potter. See further below, pp. 407, 409, 413.
35 Cohen and Gandolfo (eds.), Lewis Carroll and the house of Macmillan; Cohen and Wakeling (eds.), Lewis Carroll & his illustrators; for Rossetti, see Munro and Goddard (eds.), Literary circles, pp. 38–41.
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Because (thanks to the diameter of the trunk of most box trees) only quite small blocks of wood were possible, larger pictures had to be made by tongue and groove joints setting blocks together. By the 1840s this was done on sometimes a substantial scale. A further development was the multiple-part block that was bolted together, invented by the firm of Charles Wells in Bouverie Street – its address at the centre of the London newspaper and magazine trade is a reminder of the most considerable and most important customers. This development made possible the practice of sharing out parts of large illustrations among several engravers. The large news illustrations in the *Illustrated London News* (founded 1842), sometimes spread over two folio pages, required teams of engravers who worked separately on different parts of the pictures, and whose work was only brought together at a late stage: the merging of their different contributions, where time was of the essence, required separate and special skill. In all but the very finest work it is easy to see where the parts of blocks are joined, while variations in the natural shrinkage of the wood mean that the density and impression of the printed image can vary across the block.

With a few notable exceptions, the generation immediately after Bewick and his circle showed little sign of having learned from him. The best of the wood-engravings, but in a very different style that emphasised line, came from a handful of people including Mary Byfield (whose prayer book of 1569 was printed by Charles Whittingham in 1853, and published by Pickering) and the antiquary Orlando Jewitt, who specialised in architectural work. The wood-engravers of the mid-century have long been celebrated, since Gleeson White published an appreciative and still valuable monograph in 1897. He was followed by Forrest Reid in 1928. Both approached their subject as artists, more alert to aesthetic and technically skilled aspects than to functional issues and possibilities. But artists such as the prolific J. E. Millais, or Arthur Boyd Houghton, or D. G. Rossetti, working for magazines such as the *Cornhill* or *Good Words*, depended as much on commercial wood-engravers as did the more workaday artists employed by the *Illustrated London News* or *Punch*. Artist and engraver were almost invariably separate. One trade classified directory for London in the late 1860s listed over eighty wood-engravers. As some (such as Jewitt or William Linton) worked independently, and some of the entries such

36 The brothers Dalziel; Lindley, *The woodblock engravers*.
as that for Dorrington of Chancery Lane, or Straker, with three City addresses, represented large firms, the number of individuals was very much larger. While a few engravers (or rather, engraving firms) such as the brothers Dalziel or Swain gained fame and reputation, even being credited on the title-pages of books, very many more worked anonymously and obscurely. At its best, the printing of wood-engraved illustrations was a highly skilled operation; but as with many manufacturing processes it was also easy to produce work that was merely adequate or even slapdash. The fact that pictures could be printed at the same time as type did not guarantee any level of quality.

The introduction during the 1870s of the line-block, or zinco as it became known after the usual metal from which it was made, and its alliance to photography, eventually offered a cheaper alternative to wood, and one that was much easier to print. The earliest attempts were crude, and the lines were thick. But as skills and methods developed, so the process became capable of considerable delicacy. The principles of the half-tone block were originally explored by Fox Talbot, but it was only in the mid-1880s that the first successful patents were taken out.40 By the 1890s, half-tone illustrations were commonplace. For the first time photographs could be reproduced quickly and cheaply, at the same time as the rest of a book, newspaper or magazine. While photographs can always be edited, cut down or altered either on the negative or (generally more obviously) on the print, the advent of relief-printed half-tones was one of the greatest revolutions of all. They provided, for the first time, pictures that had every appearance of verisimilitude. The peculiar authority attached to photographs reached to the humblest of printed matter and, with it, to all classes of society. Those who wished to see photographs no longer had to peer in the windows of specialist shops. The pictures – portraits, events, places and objects – were in the weekly and monthly magazines and, later, the newspapers.

Though the half-tone block proved to be the cheapest and most widely used means of reproducing continuous tone, it was far from being the only process. Collotype, invented in the mid-1850s but only applied in Britain after patents had been taken out in 1869, was a planographic process that was capable of enormous fidelity. When used ambitiously, for example by the Chiswick Press in the early years of the twentieth century, it was supplemented by hand-touching of individual copies. More cheaply, photogravure was introduced into Britain in the early 1880s, and reel-fed rotogravure in the 1890s. New

40 See further below, pp. 130–1.
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methods contributed in fundamental ways to the development of richly illustrated magazines including the *Studio* (1893–)⁴¹ and the *Burlington Magazine* (1903–), but they were not confined to the more expensive end of the market. Cassell, who possessed a large stable of popular magazines, launched the monthly shilling *Magazine of Art* in 1888, with pictures printed as half-tones, zinc line-blocks, wood-engravings, photogravure, heliogravure and etching. It was a period of great resources in methods, and great experiment.

Intaglio illustration was based on traditional principles, requiring different skills in its preparation as well as a rolling-press in its printing. The first steel-engravings (in practice they were often a mixture of engraving and etching) were produced in 1820–1, and were used for an edition of Thomas Campbell’s *Pleasures of hope* published by Longman.⁴² Most obviously, the use of steel overcame one of the problems of printing with copper-engravings, where the image deteriorated after only a few hundred copies: in the eighteenth century, to meet the large circulations of magazines, plates had sometimes been engraved in duplicate.⁴³ The same procedure was possible with steel-engravings, and enabled similar savings in time. But steel also lasted longer, and its hard surface meant that finer detail was possible. It lent itself especially well to reproductions of paintings, whether of Turner’s landscapes or of portraits in dozens of annuals and albums of pictures. Steel-engraved pictures were usually printed on a smoother paper than that used for letterpress, and the separate printing process meant that they were inserted as independent leaves in books.

For publishers, the ability to choose among different kinds of manufacture, and different qualities of material, had always meant that costs could be flexible. Some costs, and in particular the costs of literary property, left little room for manoeuvre. By contrast, printing and binding costs offered opportunities in which various parts of the market could be explored, either on initial publication or, for example, in successive releases of editions of modern authors, in different formats.⁴⁴ Books of topography and natural history lent themselves especially to copies on both large and ordinary paper, plain or coloured. Some atlases were likewise offered plain, or coloured by hand, until colour printing made this no longer necessary. In 1830, Whittaker, Treacher & Co., publishers in London, were offering a translation of Cuvier’s *Animal kingdom* in parts, either demy octavo or royal octavo, plain or coloured, or demy quarto on India

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⁴¹ Holmes, *Self & partners (mostly self); The Studio: a bibliography.*


See also below, p. 125.

⁴³ See Timothy Clayton in the *Cambridge history of the book in Britain* 5.

⁴⁴ For Byron in the hands of Murray and others, and for further examples, see St Clair, *The reading nation,* especially appendix 9.
paper, at prices ranging from twelve to twenty-four shillings a part. For so long as illustrations had to be hand-coloured, books might be offered with or without colouring, especially in the field of natural history. There were still markets just before the First World War for special copies of books on large paper or on thin paper, meeting the demands sometimes of bibliophiles but also, in the case of the latter, for practicalities such as portability.

Paper

Most paper had always been made from rag – linen, cotton, or mixtures of the two. The extent to which second-hand rags could be used was very greatly extended by the discovery of chlorine bleaching in the eighteenth century. But by the beginning of the nineteenth century there had been many experiments in making paper from vegetable substances. In Germany, a collection of specimens of papers made from different vegetables was published at Regensburg in 1765. If Matthias Koops’s straw was the most notorious (partly because he published a book on the subject in 1800), others had attempted with more or less success to make it from materials as improbable as potatoes or beetroot. In 1801, Koops published a second edition of his book, this time on recycled paper. Underlying these experiments was a triple problem. First, there was an obvious economic need to discover a new cheap source of supply for the raw materials, in order to meet a rapidly growing demand especially for cheaper papers; second, only matter with a reasonably long fibre provided a finished product that was not brittle; and third was the problem of supply of raw materials. Any new material would have to be cheap, plentiful and readily available. There were, to be sure, those who were optimistic, such as the author of a book on vegetables and manufactures, who remarked in 1833 of cotton rags that ‘the vast quantity of these rags of all descriptions which are now available to the purpose, renders the adoption of any other material of little moment’. In his view, the abundance of possible vegetable alternatives provided excellent further grounds for optimism. Nonetheless, by the mid-century the problem was acute. Although the Lancashire cotton mills were producing very large quantities of waste, it was nowhere near adequate to keep up with demand. The trade in second-hand rags, vital to the paper industry,

45 J. C. Schäffer, Versuche und Muster ohne alle Lumpen oder doch mit einem geringen zu Satze derselben Papier zu machen, 6 vols. (Ratisbon [Regensburg], 1765–71).
46 Koops, Historical account of the substances which have been used to describe events . . . from the earliest date to the invention of paper.
was insufficient, and demand for them was growing, especially in the United States. The trade in rags was an international one, and countries competed for materials from Hamburg to Italy: France, the Low Countries and the Iberian peninsula were for this purpose virtually closed to international trade. In 1830, duty was charged in England, Scotland and Wales on 28,000 tons of paper. In 1861 (the year duty was abolished) the figure was 98,000 tons: it had grown by about 50 per cent just in the past ten years.48 In the printing industry, the greatest shortages were felt for the cheapest papers, while the single largest factor in demand was the expansion of the newspaper press. Quite apart from widespread demands for reductions in the duty on paper, one estimate suggested that just between the years 1852 and 1855 the cost of raw materials alone, for the equivalent of 1852 needs, rose by £1 million. Between 1852 and 1854, the price of imported rags rose by about 25 per cent. But, thanks not least to export demand, the amount manufactured was rising as well, with all its attendant demands on raw materials.

In 1830, about two-thirds of all paper made in Britain was made by machine, and by 1850 hand-made paper accounted for just 8.6 per cent of total output.49 Total production more than doubled between 1830 and 1850, and almost doubled again by 1870; by 1880 it had doubled yet again. Only a very small proportion of this was used for books: newspapers, magazines, wallpapers, industrial papers, wrapping papers and materials for children’s games all contributed to these figures to different extents. But the need for raw materials was increasing for each.

Nevertheless, between 1810 and 1850 the price of paper dropped almost every year, before rising gradually in the 1850s. The selective reduction in tax in 1836 brought a sharp drop, but the price continued to fall afterwards as well. The trend was mainly the result of increasing machine production, which overtook hand-made paper in the mid-1820s, but it was also attributed to falls in the prices of machinery, buildings, coal, salts and other additives.50 British production and demand could not be interpreted in isolation. No part of international trade affected the printing industries as much as the demand for paper. After generations of protectionist policies, lower duties made it realistic to import finished paper (rather than just the raw materials) from the 1850s onwards. But other kinds, particularly printing and writing qualities, were exported – mainly to the English-speaking markets.

By the mid-1850s, much attention was focussed on further alternatives: plantains from India and the West Indies, straw and flax from nearer home, and even horse dung.\textsuperscript{51} After the reduction in the tariffs on paper in 1853, imports of foreign-manufactured paper grew rapidly, meeting about 20 per cent of the country’s needs. When the tariffs were repealed in 1860 they grew again, from 1.47 million lb in 1859–60 to 4.74 million lb in 1860–1.\textsuperscript{52} Following experiments, it was still thought that the difficulties of reducing wood to pulp were too costly.\textsuperscript{53} The mid-century crisis was answered with the discovery of esparto (‘Spanish grass’) as a suitable vegetable substitute. It grew plentifully in southern Spain and north Africa, and was thus easy to obtain. The first experiments with it in Britain were made in the late 1850s by a civil engineer named Thomas Routledge. Although there were others who thought it was too expensive, in Hertfordshire John Dickinson began production.\textsuperscript{54} Imports escalated, and by 1865 about 25,000 tons out of a total of 113,000 tons of paper made in the United Kingdom were made from esparto.\textsuperscript{55} By the late 1880s the country imported over 200,000 tons of the grass annually.\textsuperscript{56} By itself, the plant produces a somewhat light and bulky paper, of a kind that was much used later for novels. It was better mixed with other ingredients, rag or (later) wood.

The development in the 1880s of chemical wood-pulp, where the pulp was broken down either by an alkaline (soda) process or by an acid (sulphite), brought some of the greatest changes of all in the better book-printing papers. Mechanical wood-pulp became widely used for cheaper work. Imports of wood-pulp (both mechanical and chemical) climbed rapidly between the late 1880s and the end of the century, rising from 122,000 tons in 1889 to 415,000 tons ten years later: by 1905 the figure was about 20 per cent higher again.\textsuperscript{57} By 1907, the country was importing annually about 203,000 tons of esparto and other vegetable fibres, about 282,000 tons of chemical wood-pulp, and about 193,000 tons of mechanical wood-pulp. This further affected the qualities and prices of paper. Quite apart from successive reductions in tax, and its final repeal

\textsuperscript{51} J. Forbes Royle, \textit{The fibrous plants of India fitted for cordage, clothing, and paper} (1855), p. 87; \textit{The Times} 27 February 1855.

\textsuperscript{52} \textit{Report from the Select Committee on paper (export duty on rags)} (1861), p. iv: Parliamentary papers 1861.xi.

\textsuperscript{53} For various contributions and suggestions concerning materials for paper manufacture, see for example \textit{Journal of the Society of Arts} 2 (1853–4), pp. 403, 486, 554, 756. The whole question was summarised by Charles Tomlinson in the \textit{Quarterly Review} 97 (1855), pp. 225–45.


\textsuperscript{55} Spicer, \textit{The paper trade}, pp. 34, 100.

\textsuperscript{56} Spicer, \textit{The paper trade}, appendix 1. See also Magee, \textit{Productivity and performance in the paper industry}.

\textsuperscript{57} Spicer, \textit{The paper trade}, appendix 1.
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in 1861, the average price of comparable qualities of paper fell from about ten-pence a pound in 1836 to twopence a pound in 1902.58 This was partly the result of new methods and materials of production, but it was also the result of improved labour productivity even as wages crept upwards. Between 1860 and 1900 the price of esparto more than halved, and by mixing it with wood-pulp manufacturers were able to produce paper of acceptable quality at ever less cost. By the early twentieth century the rate of paper consumption, especially of newsprint, was once again causing concern. Once again new sources were sought out, this time in the spruce and balsa forests of Canada.

There had always been plenty of critics ready to find fault with machine-made paper, with more or less justice in their accusations. One of the most forward was John Murray, who in the 1820s echoed Hansard in his anxiety about the short life of modern paper.59 In 1898 a committee of the Society of Arts reported on deterioration in paper.60 But the point was not whether or not it was machine-made. As the summary of recent chemical literature, conveniently reproduced in the Society of Arts’s report, made clear, the problems lay principally in the materials, including salts or other chemicals used in the course of production. In the same year the librarian J. Y. W. MacAlister proposed to publishers that they should print some copies of their books on better paper, for the use of libraries.61 He met a predictably mixed response, of sympathy mingled with commercial hard-headedness concerning who should pay: the idea was left to lie dormant until similar concerns about so-called permanent paper were raised, again from libraries, after the Second World War. The evidence of the deteriorating quality of paper, which so alarmed publishers, librarians and the public in the last decades of the nineteenth century, was in some measure contained and understood by about 1910.62 But this new understanding of the chemistry and structure of paper did not imply all-round improvements. Instead, it made possible better-informed decisions about when to use cheap paper – a world to which publishers and government adapted themselves with relish.

With the need for ever smoother surfaces to take illustrations, so-called art papers were developed. The first clay-loaded papers had been made at the

58 Ibid., pp. 89–90.
62 Chivers, The paper of lending library books.
beginning of the century, but the new generation of art papers was quite different from the hot-pressed papers that had been in use since the eighteenth century, and different again from super-calendered papers made by passing the web of paper through a tower of rollers and thus subjecting it to friction under very great pressure. The best of the art papers manufactured in the second half of the nineteenth century, which could be made of any of the ordinary basic ingredients, or a mixture of them, were coated mechanically with a mixture of water, china clay and glue. Imitation art papers, which were much used in magazines by the end of the century, differed from true art papers by the clay’s being mixed in the pulp, a process that was cheaper but that resulted in a weaker paper: after leaving the paper-making machine it was super-calendered so as to impart a surface that the earlier stages of manufacture could not provide. Of the other specialist papers used in the book trades, the most familiar was Oxford India paper. A parcel of exceptionally thin, opaque paper was brought back from India in 1841 and was used at Oxford to print a small number of Bibles in the following year. It took thirty years to discover how to make it, until in 1875 the Press published a Bible made on a similar paper at its paper-mill at Wolvercote. Demand was immediate, and heavy; and the Press introduced it for some of its other books. The secrets of the process were jealously protected, but several derivatives and imitations of different qualities were made by other manufacturers who realised that the main ingredient was rag, and that the method of beating was critical to success. A version of this paper, with its characteristic hard surface, became still more widely familiar when it was used for the thin-paper edition of the eleventh edition of the *Encyclopaedia Britannica* (1910).  

### Bookbinding

To the passing observer of a shop window, nothing changed more obviously between 1830 and 1914 than the outward appearance of books. In 1830, most books were still published in plain wrappers or drab paper-covered boards, usually grey, brown, or dull pink, and quickly stitched together. Title, name of author and (importantly) often the price were printed on labels pasted to the spine: the presence of the price was a reminder that there was no longer necessarily a distinction between retail prices in town and country. Many books never received more than this as a covering. For most books, it was assumed

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that a new, stronger binding would be supplied subsequently, for the better books in calf or, more ornamentally (and it was believed more durably), in russia leather. There were trade binders in even quite small towns, while at the top end of the market were binders such as Charles Lewis or Charles Hering in London or, elsewhere in the country, like John Shalders in Great Yarmouth, or Carss in Glasgow. The choice of a more permanent covering was made either by the bookseller or by the final purchaser: decoration, gilt or blind, was likewise according to taste and purse. A few books were issued in printed paper-covered boards, sometimes with a decorative element as well. Though printed paper-covered stiff bindings had been known in Italy since the fifteenth century, and were common in late eighteenth- and early nineteenth-century Germany, they never became as widely used in Britain even in the midst of crises in leather supply due to wartime demands for equipment. Plain brown canvas had been used to cover some kinds of books, notably schoolbooks and practical manuals, since the second half of the eighteenth century, and lighter calicoes were employed on a wider range of new books in the mid-1820s. For schoolbooks, publishers continued to use sheep, a cheap leather, even when other kinds of books were increasingly being issued in cloth. The half-dozen editions of Goldsmith’s history of England in the 1830s priced between 3s 6d and 6s were all covered in leather. William Pinnock’s many books addressed to children from their first reading lessons onwards were almost all sold likewise at this time.

Most publishers were hesitant to adopt the notion of using cloth as an ordinary covering for new publications. The first examples seem to date from 1823, and the publisher William Pickering was prominent in its use: by the early 1830s he was using it regularly, and suppliers were producing cloth for other publishers as well. At first, smooth highly glazed cloth was much used, until means were found of embossing patterns. Some of the more innovative publishers and manufacturers used watered silk for the annuals that enjoyed a reign of popularity especially between the mid-1820s and the mid-1840s: with their steel-engravings, and usually slight literary contents, these were books for the adornment of drawing rooms rather than use in the study or library. In 1836, some copies of Samuel Rogers’s popular poem *Italy*, with vignettes by
Turner and others, were bound in red watered silk: the intended market was the same as for the annuals.

During the 1830s cloth became more common in several ways – not only for books case-bound in full cloth, but also as a means of providing strengthening for spines, so that many books were now published in quarter cloth, still with paper labels providing title, author and price on the spines. Case-bindings could be made cheaply and quickly, and required less skill than binding in leather. Cloth was also usually cheap, and readily available. These bindings, more durable than those composed of paper over boards, made customer’s binding no longer such a necessity, and increasingly leather was used more for ornate or special bindings. Gilt lettering was successfully applied to cloth on the second volume (early copies of the first simply have a paper label) of a collected edition of Byron in 1832–3. It proved to be the start of a revolution in the appearance of books which has remained innovative into our own times. Printed cloths were familiar in dress and furnishings, but means were soon also found of printing words and decorations onto starch-loaded cloth, and of blocking solid colour. In the mid-1820s the introduction of embossing machines, and with them the metal dies and counter-dies bearing decorations, added further ornamental elements and also introduced new standardisation into what had hitherto been a hand process. This was not, however, the same as edition binding as it came to be understood only a few years later. Quite apart from the endless varieties of finish offered in the Bible and prayer book trade, which made heavy use of the cheap but decorative possibilities of embossed leather and cloth, other kinds of books were also offered in different garbs. In 1838, for example, the English Classic Library was advertised ‘handsomely bound in embossed leather, with gilt edges, at only one shilling extra’, and also in the best Turkey morocco, at three shillings extra.

Unlike the printing and paper-making trades, mechanisation was slow in bookbinding. But mechanisation was not all. Binders had always sought out ways of saving time, effort or materials. The introduction of case-binding, which saved time and made uniform decoration of multiple copies much easier,

68 Jamieson, English embossed bindings.
69 For some of the similarities and differences compared with the French trade, and particularly differences in the use of materials, see Malavieille, Reliures et cartonnages d’éditeur en France au XIXe siècle.
70 Comparato, in Books for the millions, is primarily concerned with the United States, but offers much on British practices: see also Rogers, ‘The rise of American edition binding’. For Britain, see Stephen, Commercial bookbinding and his enlarged Die moderne Grossbuchbinderei adapted for the German-speaking market by Hermann Scheibe. Biesalski, Die Mechanisierung der deutschen Buchbinderei, 1850–1900, deals to some extent with the first half of the century as well.
71 Pickwoad, ‘Onward and downward’. 
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had both economic and aesthetic effects. It made possible the rapid preparation of identical covers, which were then glued rather than sewn to the text-block, usually with hollow backs. It was not universally welcomed. The writer of publicity for one firm of craftsmen observed in the mid-1850s that the new practice of passing freshly printed sheets straight to the binder meant that they were sometimes pressed when the ink was still wet, and thus were spoiled with off-set. Moreover, opportunities for choice were taken away.

The whole edition being once bound with the same ornaments and in the same colour, the purchaser has no choice left to him; whatever his taste may be, he must take the work as he finds it, or go to the expense of having it bound anew; in addition to which, such bindings are for the most part rickety, and fall to pieces when they come to be much handled.72

Cloth itself presented a multiplicity of qualities. The discovery that it could be gold-blocked led to some of the greatest changes in the appearance of bindings – and, hence, in the ways that books could be publicised and presented to potential readers. It transformed the relationship between publisher, bookseller, customer and reader. Books could be sold almost as much by their outside as by their contents. In a world obsessed with decoration and pattern, gold-blocking on cloth provided the book trade with a language also for self-advertisement. From its first use, it offered a new world of decoration (fig. 1.2). But most processes in bookbinding remained stubbornly resistant to mechanisation. The introduction of the rolling machine from 1827 onwards did away with the laborious process of beating the folded and sewn sheets with heavy hammers, in order to drive out pockets of air and to shape the spines of sewn blocks into the rounded shape that would take the covering of a book. Such books did not meet with universal approbation amongst journeymen, who in 1830 called for them to be abolished. As so often, the fear was not of the machinery, but of its possible implications: that it would increase unemployment in the trade. Nonetheless, according to one calculation the number of people engaged in bookbinding just in London rose sixfold, to over 3,600, between 1830 and 1861.73 Demand for books ensured demand for skills. In a trade where so much depended on hand labour, not everyone was well paid. The women employed to bind the thousands of Bibles and New Testaments printed for the British and Foreign Bible Society were shamelessly exploited until the scandal broke in 1849–50.74

74 Howsam, Cheap Bibles, pp. 138–46; Potter, ‘The London bookbinding trade: from craft to industry’.
One of the most labour-intensive parts of bookbinding was in sewing the sheets together. Costs were kept down by employing female labour, but other means of manufacture became increasingly necessary as the numbers of books grew. In 1843 Walter Hancock, a pioneer of steam carriages on roads, took
out a patent for the manufacture of caoutchouc, a thin India rubber, for a method of binding whereby the folds of the sheets in the spine were cut off, and the exposed edges painted with thin coatings of latex that were then in turn covered with a thin cloth. The result, which worked best on thicker paper, was to provide a flexible spine that gradually stiffened, as the rubber hardened, until within a few years it was all but impossible to open a book bound thus without its disintegrating. Nevertheless, the material enjoyed a considerable vogue especially for the more lavish illustrated books printed by chromolithography; by 1843 the London binders Westley & Clark had a busy ‘caoutchouc’ department.

The largest bookbinding establishments were specially designed. In 1842, Westley & Clark occupied a six-storey building in the City of London, each floor allocated to particular tasks. On the first floor was the ‘Pinnock room’ so named after the constant work to meet demand for the ninepenny Pinnock’s Catechism. Further up the building were special rooms for the binding of annu-
als, for the making of cloth cases, for gilding and for the ‘caoutchouc’ bindings. There was no mechanisation. Sheets of paper received from the printer were folded by hand, usually by women; and after folding they were passed to other women who sewed them ready for binding. During busy seasons, the firm employed about two hundred women, paid between ten and eighteen shillings a week, and it was observed that bookbinding was one of the few occupations open to women for regular paid employment. Only after sewing was the process taken over by men, for the backs of the new volumes to be rounded, a heavier process that involved much hammering. Any edge-decoration, such as colouring, marbling or gilding, was done before the covers were added. For books that were case-bound, embossed decoration to the covers either could be added to the cases while they were still flat, or could be done once the book was bound. Imitation morocco and roan, two cheap kinds of sheepskin, were widely used for the covers of prayer books and Bibles, as well as for some schoolbooks: binders were adept at making them appear suitably attractive. Skiver, split sheepskin, was cheaper still. In Bermondsey in the 1840s, the centre of leather manufacture, there were between twenty and thirty fellmongers working with sheepskins for various finished goods.  

The cloth bindings used by publishers such as Pickering in the 1820s and early 1830s were usually of undecorated cotton loaded with dyed starch and then cal-
endered. 76 With the invention of a means of producing rolls of cloth embossed

75 ‘A day at a leather-factory’; ‘A day at a bookbinder’s’. 76 Leighton, ‘Canvas and bookcloth’. 
with patterns, publishers were presented with a vastly increased choice. Pebble, ribbed, bead-grained, diapered and even morocco leather-grained cloths were widely used, and the increasing use of colour in book cloths added further to variety. In the large gift-book market that developed in the mid-century as costs went down and cash for recreation increased, thicker boards were used, bevelled edges became commonplace, and leather or paper overlays added their further eclectic effects to ever more ornate gold- and colour-blocking. Gilt edges added further to the gaudiness. Firms such as Routledge made their reputations and fortunes by feeding and encouraging a taste for gift-books that flaunted their decoration. Bookbinders such as Edmonds & Remnant, Leighton and Bone & Son met challenges in materials that had scarcely been imagined a generation earlier. The gift-book market was not alone. Although other kinds of books tended to comparative restraint, the last third of the century was noticeable for the ways in which decorative conventions were applied increasingly to other kinds of books, by publishers striving for attention in an over-decorated world. Books of travel and natural history, having claim to a general sale, tended also to be published in decorated cloth. Some bindings were signed by their designers, and others were distinctive enough for the name of the designer to be clear to an informed eye. W. Harry Rogers, John Leighton, Owen Jones, Walter Crane, D. G. Rossetti and William Nicholson were, at different periods, among the better-known. Hand-in-hand with new ideas in the late nineteenth and early twentieth centuries for the display of books (it is usually difficult to be certain about which led the other) went an increasing dependence on decorative cloth covers for novels clamouring for space and attention.

The advent of glazed printed paper bindings transformed the much larger reading environment in the mid-nineteenth century. As has already been mentioned, the first paper bindings had been introduced centuries earlier. In the 1820s, publishers such as Longman, Thomas Tegg and J. F. Dove employed buff paper boards, printed letterpress and decorated with some typographic ornament. The contrast with the more elaborate paper bindings of Christmas and New Year gift-books published by Ackermann and others at the same period was all the more striking. By 1850, glazed paper boards were commonplace, printed either letterpress or by lithography, and with decorations either

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drawn (for lithography) or engraved in wood (for letterpress). Colour was normal. The shiny hard surface, which repelled minor dirt, was perfectly suited to more prolonged use, and it was the basis for the decorated paper-covered boards of the Railway Library and its many rivals in a market where uniform low prices and distinctiveness in display were paramount. Paper also lent itself easily to stamping or embossing, while elaborate black papier mâché bindings, sometimes looking at first glance more like carved wood, became fashionable for the gift market in religious literature. Card covered in coloured paper and printed in further colours proved ideal for children’s books, though in this as with so many publications of the century customers might be offered a choice: *The pet lamb*, published by Darton & Hodge in the 1860s, and with illustrations printed in colour from woodblocks, was available at sixpence, one shilling (‘indestructible’) or 1s 6d (‘washable indestructible’). Paper was cheap, and it was easily decorated; its adoption for the covers of new novels, with pictures suggesting something of the contents, was formative in the new ideas in design and presentation in the 1890s and early years of the twentieth century.

The immense increase in the numbers of books printed in the last two decades of the century and in the early twentieth century forced publishers and bookbinders to find ever cheaper and faster methods and materials. Stitched wire bindings, and wires stabbed through the text-block, made their appearance in the 1870s. They were certainly cheap; but they had several disadvantages. Wire-stabbed bindings on thick books made volumes rigid, and difficult to open. And wire was itself liable to rust. Sewing with ordinary thread was finally mechanised with the invention of the Smyth sewer in America, patented in 1868. It was introduced into Britain in the early 1880s, and the first machines in Britain seem to have been installed by Frederic R. Daldy, in London.79 A dozen machines were in use at James Burn & Son by 1885.80 By the early twentieth century, other manufacturers were in play, of which the most important were Martini and Brehmer. Gradually, binding had been all but completely mechanised.

Leather bindings were not necessarily durable. They remained popular especially for show, in private collections, even when cloth would last longer. The introduction of hollow backs in the early 1820s brought a structure that placed the greatest strain on just the part of a leather binding that was the weakest, where the leather had been pared away at the joints.81 Heavy, or even just moderate, use led to the parting of the spine from the boards. By 1900, half a

century of heavy use of books in public libraries had tested the physical properties of books on a scale that had never before been even approached. The results were not encouraging. While it was commonly thought that leather was best, it was plain that different tanning practices, the use of poor imported leathers, the practice of splitting skins for even thickness, the unnecessary use of acids for improving colour, and some of the embossing processes in common use all contributed to a measurable decline in longevity, and to the disastrous appearance of books bound only quite recently. The Royal Society of Arts followed its report of 1898 on paper deterioration with another on leathers in 1905. Bindings were inadequate, and when repairs were called for it was clear that librarians had inadequate knowledge of what to order. Leather itself was prepared in ways that provided superficial short-term attractions but led to quick deterioration, and by 1901 Douglas Cockerell, one of the most respected bookbinders and repairers of his generation, wrote confidently that ‘it is no exaggeration to say that ninety per cent. of the books bound in leather during the last thirty years will need rebinding during the next thirty’. Materials and methods apart, he also blamed the conditions under which books were kept: gas light was among the most damaging factors of all. It was all too obvious to others as well that the papers selected by some publishers had little life or strength in them. For papers, some authorities blamed the processes of manufacture, and other blamed the ingredients: the bulky and widely popular featherweight, or antique paper, much used in novels, children’s books and general literature, was a mixture of esparto and wood-pulp that was easily marked and was next to impossible to repair satisfactorily.

The decorative dust-jacket, with pictures replacing plain typography, seems an obvious piece of advertising artillery, but it developed slowly. The paucity of surviving specimens before about 1900 makes generalisation difficult, and it is still more difficult to assess how far these often stray examples are representative of their publishers, or their generation. But protective card coverings and slip-cases for books had been used at the end of the eighteenth century, and by the 1830s they were frequently employed for children’s books, almanacs and annual keepsakes. A little later, other coverings of paper, rather than card, were folded over the entire book, like wrapping paper. The jacket in its modern sense was developed in the 1860s, and in 1889 examples are recorded from the

82 See above, p. 95.
83 Cockerell, Bookbinding, and the care of books, p. 18. See also below, p. 667.
84 Chivers, The paper of lending library books (dealing also with American books); Coutts and Stephen, Manual of library bookbinding. See also pp. 16, 95.
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Clarendon Press, Griffin, Longman, Sampson Low, Routledge and Frederick Warne. The list is but a shadow of what has now been lost or discarded. In the first decade of the twentieth century the jacket became an essential marketing tool, and much more than a protective cover. Colour pictures on the fronts and spines provided devices for bookshop displays especially of fiction, while the value of wrappings with plain typography was recognised even for the most recondite of other books. Plain glassine or ordinary paper was employed where no extra expense was wished.

In all this, the publisher was paramount, arranging for design and printing as well as for binding. Though a few publishers still released stocks of new-printed books only in sheets, the notion of a publisher’s binding was still not the same as a binding uniform in all copies of an impression. Books were bound (or, more strictly, cased as required by the market, and unbound stocks of paper might be held for decades: inevitably the result was variation. Even books released at the same time might be in different colours or patterns of cloth, depending on what the binder had in stock that most nearly matched the publisher’s specification. So-called ‘remainder’ bindings, usually cheaper than those originally employed, were put on slow-selling stock that it was wished to clear at lower prices. Colonial editions usually had their own bindings, sometimes to fit in with publishers’ series: such books might be available either in cloth or in paper wrappers. The publishers’ aim in this market, for cheapness and for profit, was not universally appreciated among customers.

The trade with Australia was important, but it was not always understood. In manufactured goods, by the late nineteenth century Britain was competing with continental Europe and with America for a demanding market. In printed matter, language generally gave Britain an advantage over Germany or France, but not over America. When in summer 1914 a correspondent of the Author reported on his impressions from a visit there, he was immediately taken up by the Publishers’ Circular. The core of his complaint was a visual one: that British publishers were being endangered by the greater attention being paid by American publishers to the outward decoration of their books, and that window-dressing was being ignored. ‘Australian booksellers prefer gaily coloured picture covers, highly glazed paper, plentiful decoration and illustrations, and, it may be, gilt tops. The American publisher provides all this, whilst the English publisher in very many cases prefers to supply in his

85 Tanselle, in ‘Dust-jackets, dealers, and documentation’, provides a list of almost four hundred British and American examples down to 1890, with an emphasis firmly on America.
87 See further below, pp. 200–1, 600–1.
“Colonial edition” – Australians detest that phrase – a format somewhat more drab and unexciting than he uses for his English editions. The comparison was not unfair, but the question was a larger one, touching not just on area rights, but also on publishing as a world activity. In Sydney, the Australian edition of Scribner’s Magazine was a reminder of the attention being paid to a significant market by New York publishers. With trade boundaries difficult to police even where it was desired, publishers were competing both amongst themselves, title against title, and with foreign rights holders as well. As always, price and presentation both affected choice. In a market where monopolies could be controlled that hardly mattered. In an international environment it was critical. Debate was shifted from copyright to competing production values, and thus placed the customer, not the author, to the fore.

Price and appearance

The concern for prices that had preoccupied publishers, authors and readers in 1830 remained very similar in the different environment of the early twentieth century. It has already been emphasised how important price structures were to the market in the early 1830s, not least in the sale of fiction and in the efforts of Charles Knight, Robert Chambers and others to produce cheap informative literature. As was repeatedly demonstrated by publishers who first issued new books at a high price and then gradually produced editions in smaller formats, in smaller type and on cheaper paper, each gradation of edition exploiting another sector of the market, book-buying was always highly price-sensitive. Though the real price of new books had dropped markedly by the end of the century, the same structures were still key to successful publication of many kinds of literature. This had been true of Bible and prayer book publishing since the sixteenth century. For the most popular authors, publishers strove to provide a choice to suit every taste and pocket. In the 1870s, copyright in Scott’s Waverley novels belonged to A. & C. Black, in Edinburgh. They offered a sixpenny edition (four volumes, in decorated cloth or half-French morocco at a guinea, or £1 7s in half calf), a shilling edition (twelve volumes, at £1 11s 6d in cloth, £2 in half leather, or £2 12s in half calf), a centenary edition (four guineas in cloth for twenty-five volumes, or half-bound in calf

88 A. J. Dawson, quoted from the Author July 1914, in the Publishers’ Circular 11 July 1914, p. 27. For further remarks, especially on increasing sales of American magazines in Australia, see the Publishers’ Circular 15 August 1914.
89 See above, Introduction, pp. 43–4.
or morocco), a pocket edition (£1 17s for twenty-five volumes in cloth, or £3 5s in limp Cape morocco, and also available at 1s 6d a volume), an ‘author’s favourite’ (£7 4s, forty-eight volumes in cloth, and kept in print for decades), a Roxburghe edition (£1 15s a set, in half leather, in forty-eight volumes, or in cloth for ten guineas) and a library edition (8s 6d a volume, published monthly). Specially designed bookcases were available for each. The sixpenny edition was further available in individual volumes, with paper covers. Printed in small type in double columns, it was obviously inferior to the shilling edition, which was printed in single columns and in larger type. For those who could not accommodate a bookcase, there was also a boxed set, crammed into a space of $12 \times 9 \times 9\frac{1}{4}$ inches. The poetical works were offered on the same principle of maximum choice. All these were from Black, but other publishers also offered Scott, including a ‘best library edition’ from Henry Sotheran in London, with illustrations by Stanfield, Leslie and others, for prices between nine guineas and £2 1s (‘a choice set for presentation’ in morocco super extra, with borders of gold and gilt edges). Much was made in publishers’ advertising of convenience; but from much of this advertising it is evident that appearance was at least as important. The cheap leathers and imitations whose descriptions can only have been partly understood by shopkeepers, let alone customers, made it clear that these were books for furnishing.

Tennyson, eventually, became available in comparable variety, in different formats, different bindings, different type sizes, on different qualities of paper and at accordingly different prices. Copyrights in his work were divided between several publishers for much of his career, and it was not until 1884 that Alexander Macmillan was finally able to achieve his long-sought ambition of obtaining most of them.\footnote{Hagen, \textit{Tennyson and his publishers}, p. 158.} At the most expensive end of the market, the four Arthurian poems \textit{Elaine}, \textit{Guinevere}, \textit{Enid} and \textit{Vivienne}, each with illustrations by Gustave Doré, were available in the mid-1870s on separate sheets, in four portfolios for £2 1s, from Henry Sotheran (who also offered them bound up into a half-morocco scrapbook for £3 0s), or could be had separately bound in decorated cloth from Ward Lock, who had taken over the stock from Moxon, at a guinea each. Most of Tennyson’s work at this time was controlled by Henry S. King, who offered four main collected editions, from the ‘Imperial Library’ to the ‘Miniature’, variously bound in cloth, Roxburghe-style leather or imitation vellum. \textit{Idylls of the king} and other poems, illustrated with Julia Margaret Cameron’s photographs, cost six guineas for each of the two volumes, but the \textit{Idylls} were also available at five or six shillings. The small green
cloth volumes that became almost ubiquitous presences in private libraries cost
tween three and six shillings, and this was the form most familiar to those
who possessed Tennyson. King retired in 1877, and for a few years Charles
Kegan Paul was Tennyson’s main publisher until his copyrights passed to
Macmillan. Thereupon, Macmillan immediately issued a new one-volume edi-
tion for 7s 6d and another in seven volumes, available also on hand-made paper.
A school edition appeared in the same year in four parts at half a crown a piec.
Macmillan continued the tradition of green cloth octavos for individual titles,
but he also needed to recoup his investment, and in 1885 extended the market
further with a new edition of the Tennyson birthday book, whilst a selection
by Francis Palgrave and a new edition of In memoriam were published in the
Golden Treasury series, both available also on large paper. In the following
year a new miniature edition was published, the plays and the poems in two
separate series.

From this kind of market analysis it was a simple step to selling all kinds
of books by price. Ward Lock’s catalogue in the 1870s was organised both by
title and in gradations of price, from the penny books taken over from Beeton,
and a penny Shakespeare, to five guineas for a large folio collection of helio-
types of Windsor Castle taken by the Queen’s Librarian, Bernard Bolingbroke
Woodward. Most of their books were between sixpence and five shillings. By
the early twentieth century, the practice of arranging lists of books by price
had become widespread. Though there were a few specialist publishers who
did so, such as Pitman (shorthand), and the religious publishers Skeffington,
most were notable for being generalists. Cassell, Constable, Grant Richards,
Hurst & Blackett, Hutchinson, John Murray, W. P. Nimmo, Thomas Nelson
and Smith, Elder all did so in their catalogues. All were major publishers of
new novels. Berenson’s Florentine painters topped Murray’s list, at £21; but for
all these publishers the more important parts, both for investment and for
income, were at the middle and the bottom, in the novels priced at 4s 6d to 6s,
and in the shilling, sixpenny and threepenny libraries that were such a feature
of the pre-war trade.

From mid-Victorian to Georgian

Between about 1860 and the mid-1880s the outlook for the printing trades
was transformed. New materials on a large scale had been introduced for the
first time since the middle ages. New issues arose concerning the longevity of
books and other paper-based products. The appearance of books was funda-
mentally changed, though the change was not always obvious in books freshly
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published. It changed again, almost as dramatically, during the last thirty years or so of this volume. Visually in its covers, its typography and its illustration, the British printed book of 1914 was far removed from its ancestor of 1830. Manufactured almost entirely by machine, mostly printed on paper manufactured with materials unthinkable in 1830, and dependent for its publicity and mobility on the modern electrically driven presses of newspapers and on steam trains that only just existed in 1830, its differences were obvious even to the uninformed.

John Southward’s *Practical printing* was first published in 1882. It became the principal handbook until the First World War, republished in successively revised and enlarged editions. By the sixth, of 1911, methods and practices had changed substantially. Composing machines, innovations in three-colour printing, labour-saving devices for make-ready on the presses, and the definition of an agreed point system (accepted in Britain in 1898) for measuring type all had their effect not just on working practices, but also on the appearance of books. When Southward’s book was originally published,

composing by machinery was but tentative, on lines now superseded, and was confined to a few enthusiastic pioneers; a uniform standard for type-bodies was wished for, but seemed hopeless to attain; display composition was but a rudimentary art; half-tone blocks were unknown; printing on damped paper with soft packing was usual, and the use of the hand-press for working off was far from uncommon; while fast-running machines with solid beds and geared inking arrangements were reserved for the future.91

Nonetheless, and in quite basic ways, the printed book looked backwards. The tradition of the codex had not been replaced, or even threatened; and the fundamentally conservative essentials of reading remained, adjusted and sometimes even challenged, but not superseded.

As demand grew alongside some publishers’ determination to find as large a market as possible, so there was a transfer of technology. The application of newspaper and magazine printing methods and machinery to book production had become commonplace by the 1890s, and thanks to the use of cheap newsprint enabled publishers such as A. & C. Black, Macmillan and Cassell to publish full-length novels at sixpence apiece. In Manchester, W. H. White’s Manchester Library included *Oliver Twist*, *Ivanhoe* and Darwin’s *Journal of a voyage round the world* at threepence each in paper covers, or sixpence in cloth. *Vanity Fair*, in two volumes, and with Thackeray’s illustrations, was crammed

into just under three hundred two-column pages. Edited by the radical journalist W. T. Stead, the Review of Reviews provided substantial selections from poets, and abridged versions of full-length novels, in the 1890s for one penny each: Mary Barton, for example, was reduced (with some difficulty according to the anonymous woman who did this) to just sixty-eight pages. Clowes was the leading printer for this series. The type was reasonably large, unlike that in most of the small volumes from Milner of Halifax, which had been selling by the tens of thousands since the mid-1830s. Prices were kept down not just by stereotyping and cheap paper, but also by advertising revenue: Fry’s cocoa, Beecham’s pills, Pears’ soap and Hovis bread all featured regularly in the endpapers and on the cover-sheets of these paper-backs, and the Victorian obsession with medical ailments was further reflected in advertisements – some from quacks – promising remedies for tooth-ache, deafness, ruptures and corpulence. Both old, non-copyright, authors and contemporary writers were printed with the new, cheap, technologies and materials, and in the same contexts of heavy advertising.

From another point of view, the year 1914 presented a dichotomy. In June that year Wyndham Lewis launched his new periodical Blast! and thus forced into the world of the British printed book issues of recent design that were to be seen at art galleries in the work of painters and sculptors such as Kandinsky, Gaudier-Brzeska, Edward Wadsworth and William Roberts. With its heavy sans-serif title set at a defiant angle, its pink-violet wrappers and its text printed on thick brown paper it challenged convention and taste.

In cubism, vorticism, futurism and other movements, the world of print, and of the printed book, was being examined anew. Most of this activity was overseas. At the beginning of the new century, Ambroise Vollard’s publication of Verlaine’s Parallèle (1900) and Longus’s Daphnis et Chloé (1902), both with lithographs by Bonnard, had set their roots in older exploitations of lithography applied to book design; but they introduced the livre d’artiste to fresh markets and were a timely challenge to the widespread undervaluing of lithographs and to the traditionally based assumptions of art nouveau. In 1913, Blaise Cendrars’s La prose du Transsibérien et de la petite Jehanne de France printed in two columns on four long sheets of paper, the text justified variously against the left and right margins brightly overlaid with washes of colour, broke with the codex tradition. Mallarmé’s poem Un coup de dés, first published in 1897 and then again in 1914, exploited typographic drama to achieve emphasis and relationships and, like the work of Cendrars and of Apollinaire a little later, sought to overcome the sequential insistence of conventional typesetting. But the 1914 setting was quite different from the
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earlier one. Aggressively, typography created meaning, and thus could also change it. More explicitly, in Italy, Marinetti’s *Zang Tumb Tumb* (1914) offered a manifesto against ‘the so-called typographical harmony of the page, which is contrary to the ebb and flow, the jolts and explosions of the style which moves over the page itself’. In Russia, Aleksey Kruchenykh used lithography, and the cheapest of papers, to explore overlapping relationships between text and print in books that were deliberately made to appear crude.

Though they achieved varying degrees of post-war influence, none of these experiments could be considered in the mainstream of book design and production. Instead, they had a common desire to re-examine old assumptions. With *Blast!*, published by John Lane, the boundaries between the world of ordinary commercial book publishing and that of artists seemed to be partly overcome. Lane’s other authors, especially in the 1890s, included several who were considered advanced, and his artists had included Aubrey Beardsley, Walter Crane and Charles Ricketts, all innovative. He had published the *Yellow Book*, equally advanced for its time. For his printing, he relied chiefly on C. T. Jacobi of the Chiswick Press and Walter Biggar Blaikie of T. & A. Constable: given guidance, ordinary commercial printers were as capable of producing original work as well as were others who were noisier. The trial in 1895 of Oscar Wilde, one of Lane’s authors, proved a turning-point. By 1914 his firm issued A. C. Benson, G. K. Chesterton and H. G. Wells. Conventionality and adventurism became bedfellows. In *Blast!* ideas from one world were selected and absorbed into the other; conventionality was challenged, and perceptions of the book (more than just book design) were required to be re-examined just as they had been in the sixteenth, seventeenth and eighteenth centuries with the separate, related and finally partly integrated trade in copper-engravings and etchings. The contrast between the typography of the main part of *Blast!* and the conventional setting employed at the end of the volume for Lane’s advertisements for his other publications (complete sets of the *Yellow Book* were still to be had new for £3 5s) made the point all the more forcefully.

Visitors to the great international exhibition of the book that opened at Leipzig in May 1914, the largest of its kind ever to be undertaken, found a very different and cautious approach on the part of British publishers and printers

92 Both the 1897 and the 1914 versions are reproduced in Bartram, *Futurist typography and the liberated text*, pp. 10–11. These themes are further explored in Bury (ed.), *Breaking the rules*.


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David McKitterick

if they compared it with many continental counterparts. The British pavilion was determinedly rearward-looking, a stone Tudor-style mansion with mullioned windows, a cobbled courtyard and timber mock-Tudor ceilings. Outside was a sunken Tudor garden. An exhibition of Shakespeare was laid out on old oak tables. This was composed of facsimiles and photographs, but in special sections of travel and discovery and of illustrated books there were several works of considerable value, including a vellum copy of the Kelmscott Chaucer and some rare eighteenth-century children’s books borrowed from the St Bride Printing Library and from F. J. H. Darton. The exhibits, old or recent, were suitably conventional, and achieved the desired result of bringing to a largely German-speaking audience some of the British developments in manufacturing, typography, illustration and bookbindings, within a reassuring historical context of literary accomplishment. There was a heavy emphasis on arts and crafts, and as contributors to the catalogue Emery Walker and B. H. Newdigate ensured that the work of the major private presses was adequately covered. The lack of any mention of Linotype or Monotype machine typesetting was a glaring omission, and served to emphasise the regressive mood. A special section concentrated on the work of women artists, and another, housed in the separate Kultur-Halle, was devoted to graphic art. Publishers made little attempt to present themselves as forward-looking: the emphasis was on past achievement, which could almost speak for itself. No British type-founder exhibited, perhaps because there was no chance of any serious export business: books and pictures are more readily transportable and saleable. By contrast, German exhibitors included the great typefounding houses of Bauer, Flinsch and Stempel, all of Frankfurt-am-Main, besides several smaller ones. There were representatives from Berlin of Mergenthaler (Linotype), of Monotype and of Typograph GmbH, and dozens of German press-manufacturers, printers’ suppliers, paper-makers and industrial bookbinders. In the event, the exhibition proved not a beginning, but a terminus. With the outbreak of war in August, before the planned end of the display, there was considerable anxiety in Britain for the well-being of the more valuable books and for the hundreds of other exhibits that could not be rescued in time and had to remain in Germany.

One effect of this retrospection was to isolate the period leading up to the First World War, years that were on the one hand determinedly different (‘Edwardian England’, ‘Georgian’) and on the other self-consciously modern. The term ‘Georgian poetry’ won widespread acceptance thanks to Edward

95 Publishers’ Circular 11 April 1914, p. 431.
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Marsh’s anthologies of that title in 1912–22. The new publishers of the last years of the nineteenth century, such as William Heinemann, John Lane and the Bodley Head, T. Fisher Unwin, Edward Arnold and J. M. Dent, were absorbed into the mainstream. The ferment of book design that marked the 1890s, in work by Aubrey Beardsley, Walter Crane, Charles Ricketts, William Morris and others was only partly carried forward. Some of the initiatives in pocket libraries survived and prospered, such as Dent’s Temple Classics (1896–) and Everyman’s Library (1906–), and Grant Richards’s World’s Classics (1901–; later taken over by Henry Frowde and then by Oxford University Press). Others, not seeking canons of literature or knowledge, enjoyed briefer careers, such as Fisher Unwin’s pioneering Pseudonym Library. Not only did experiments not always develop; in many respects there was a reaction against innovation. Both Everyman’s Library and the World’s Classics survived and prospered because their lists were, for the most part, built on authors whose reputations were already established, and they provided convenient editions at low prices. Just as in the late 1820s and the 1830s publishers such as Bentley or Colburn had sought to consolidate and extend their markets with series, so the final decades of the nineteenth century witnessed a resurgence of interest in such methods, with both general series and more focussed ones like Longman’s Badminton Library (for sport) or Fisher Unwin’s Mermaid dramatists, mainly of the seventeenth century.

Most book typography of the first two decades of the twentieth century remained tenaciously conservative. Nowhere was this more obvious than in the strictly commercial decisions of manufacturers of the new typesetting equipment to concentrate on old and familiar typefaces. In printing for the sciences, where major advances in engineering, physics, medicine and the infant field of electronics all required to be set in print, in journals, monographs, textbooks or more general works, willingness to explore printing technology lagged behind advances in knowledge. As we have seen, the means to print colour photographs had been available to the book trade since the 1890s, and had been used by A. & C. Black for their series of Colour Plate Books. It was not suited to all books: Gray’s Anatomy, for example, was still – and effectively – illustrated with drawings and line diagrams, with colour superimposed to draw attention to particular features. Furthermore, in hundreds of books the use of black and white half-tone printing of photographs was unimaginative and technically poor, when compared with many popular illustrated publications about places associated with leisure. Typefaces whose thinness was ill-suited to the shiny surface of art paper were nevertheless used, so that half-tone pictures could be printed on the same page in one operation: this resulted in

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useful savings in costs, often at the expense of clarity. In new novels, publishers frequently succumbed to the temptation to offer bulk in return for price, with too much white space on the pages and paper in which the high esparto content provided both thick leaves and a surface that required little make-ready by the printer – thus, again, giving a saving in cost.

Amidst these contradictions, celebrations and anxieties, the Janus-like qualities of the Leipzig exhibition, both historic and of the present, were to some extent captured by the publisher John Murray, whose introduction on the history of British publishing began in 1403 and ended with reflections that had an applicability far beyond the English Channel and the North Sea.

Perhaps the dominant influence in the trade of to-day is the enormous number of books published yearly, monthly, almost daily . . .

The consequence is that the stock of a publisher and of a bookseller is always tending to become dead sooner and sooner. Remainders and second-hand copies are thrown on the market at ruinously reduced prices, almost before a book has passed its infancy, a glut sets in, and booksellers complain that they can scarcely earn a living by selling books alone. This seems to me the great drawback and danger which now besets the book trade.96

The need for publicity was paramount. It was disingenuous of Murray to repeat booksellers’ complaints about the urgency to diversify. They had diversified ever since the sixteenth century. At different times, and in different combinations, beer and wine, patent medicines, stationery, office equipment, refreshments and newspapers had all supplemented businesses and livelihoods. Diversity was a fact of bookselling, not a consequence of modern publishing practices. But the pace of publishing and bookselling had indeed changed. In 1913, the last full year unaffected by war, the fullest and most readily available figures reported that some 12,379 titles were published, quite apart from newspapers, magazines and other periodicals. Of these, 9,451 were new works. These figures excluded most pamphlets, most government printing, and a mass of locally published materials: the actual figures may have been twice these. Nevertheless, numbers had grown by almost a half since 1904, in a period of just ten years.97

As numbers increased, so inescapably did the pace of new arrivals. For booksellers and for the reading public, needing to choose, prompt help was essential. Publishers had to advertise, more frequently and more ostentatiously.

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Figure 1.3 ‘Yellowbacks’ all published at a shilling, from the 1850s to 1870s. Fenimore Cooper’s *The pilot* was available at various prices, not only (as here) as a paperback but also in limp cloth gilt, in picture boards, or in cloth gilt, with a frontispiece. Ward Lock’s Lily Series was designed to counter the many books issuing from the press ‘low in tone and lax in character’: its authors included Louisa M. Alcott and Susan Coolidge, and it was claimed that over 1.6 million volumes had been sold by the time that this volume was published. (Private collection)
The brightly coloured paper bindings on the novels and other undemanding literature that had quickly come to characterise railway bookstalls in the mid-century were designed for one purpose: to catch attention. Their glazed yellow, green or blue paper shone out distinctively among more obviously worthy publications (fig. 1.3). The dust-jackets that became increasingly frequent in the last years of the nineteenth century provided not just protection against accidental dirt, but also ready-made vehicles for information and publicity. Though they were employed on all kinds of books, they were most effective on novels. In shop-windows, in table displays and on shelves, new books jostled for attention by their designs and by their prices. Ranked on the shelves, spines showed prices in type often more prominent than that used for authors’ names or titles of books. Set in piles on tables (a method of book display to which the picture cover, either on the dustwrapper or printed direct on the cloth cover, was ideally suited) multiple copies could be offered in bulk, with the hint that in stocking so many copies the shopkeeper was helping his customers keep abreast of general taste. Publishers provided special show cards, and shops were encouraged to devote entire window displays to individual new publications.

Nevertheless, if by 1914 books and magazines were strikingly diverse in their outward appearance and in their inward design, they all depended on the same kinds of technology. Changes in methods and fashions for illustration are examined in more detail in the following chapter, for the changes here were not only among the most obvious; they also enabled new ways of presenting content and new ways of guiding the experience of reading. This volume then turns to different kinds of books, and the ways in which authors, publishers and booksellers created books that fuelled revolutions in demand for reading matter.