

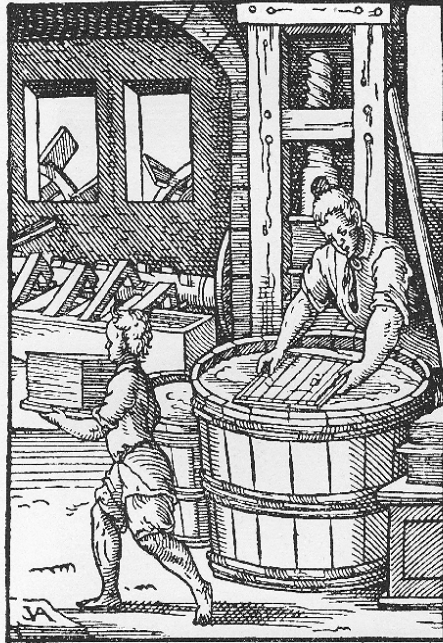
Professorial Platforms

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**“The Ubiquity and Variety of Books:
a personal view of old books and bindings”**
- an essay to accompany the lecture entitled
“Finding words - the Ligatus Glossary Project”

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Der Papyrer.



1. The Papermaker.

The Ubiquity and Variety of Books: a personal view of old books and bindings

Having spent much of my professional life researching into the binding of books printed in the era of the handpress (the mid-fifteenth to the mid-nineteenth century), I sometimes look at colleagues who work on medieval manuscripts and think how much easier their lives must be, simply because there are so many fewer medieval manuscripts than there are printed books, even early printed books, and only a small proportion of them retain early bindings. Indeed, it is one of the curiosities of the library world that old printed books are so often called rare books, because of all the objects that have come down to us from the past that have any sort of individual value, books survive in larger numbers than almost anything else. A recent estimate of numbers offers a figure of one hundred million books printed before 1600, that is before, therefore, the great increase in literacy and with it the market for books, in the eighteenth century. If we remember also that the millions of books printed before the nineteenth century that fill our libraries represent only a fraction of what was made, it is hard to avoid the impression that printed books came to pervade the western world on a scale it is difficult to imagine now. If we also realise that each one of these books, until at least the mid-nineteenth century, was made entirely by hand, without the benefit of industrial machinery or any sort of automation, we can begin to see how significant a role the

production of books played in the national economies and the lives of the citizens of the book-producing nations.

It is quite sobering to think, as I sit at a computer keyboard and type these words, to know that what I write can be sent to a printer which can turn this text into the booklet that you are reading with little more than the touch of a few keys on a keyboard, of the amount of work that was required to produce even a simple book in early modern Europe. From the handbuilt book to books on demand is an astonishing transition, and as we embrace, or brace ourselves against, the digital age, it is perhaps timely to remind ourselves of what went into that earlier revolution in technology that made the mass production of books possible, and how much physical labour went into making them.

The printed word needs a surface to be printed on, and the success of printing required access to a substrate that could be produced in the quantities that would make it commercially viable. It can be argued that without paper, printing could never have succeeded, but it can also be argued that in the wake of printing, papermaking became an industry. Making the paper to print on required not only the erection of paper-mills with access to sufficient clean, alkaline water, but also the means for securing the raw material, linen rags, from which the best paper was made (we need not, I think, consider here the harvesting and preparation of flax into thread). The best rags were

those which had been lived and slept in, and washed and worn many times, as this prepared the fibres for the processing needed to turn them into paper. Collecting the rags was an international business, involving the work of an army of the rag and bone men, the remnants of whom I remember seeing as a child still at work in the 1950s, scouring the streets of the towns and cities collecting discarded sheets, shirts and whatever else would supply the papermills with their raw material. The rags were then sorted (by hand) according to material and colour, the white linen being the most highly prized, as in the days before strong bleaches, it alone would make white paper. The papermills also needed copious supplies of clean, hard water, both to make the paper and also to power the beaters that reduced the rags to a pulp of fibres in water. Mills therefore had to be situated where such water was available, though this might be a great distance from the centres of commerce and distribution where the printers had to work.

The paper pulp was transferred to the papermaker's vat, into which a paper mould was dipped by the vatman to pick up enough of the pulp to fill the mould for each sheet of paper, shaking it to even the pulp out across the mould and letting it drain, at which point it was couched by the coucher onto a felt blanket. The term 'repetitive strain injury' was unknown to the vatmen, but they would have recognised the condition when, after years of work, their arms could no longer repeat the shaking motion of

the mould and they were forced to give up the work. The sheets were piled up into what was called a post (a stack of alternating newly-couched sheets and felts) and then pressed to squeeze out as much water as possible, after which they were hung on lines to dry in large drying lofts, before being taken down and immersed one by one in a tub of warm gelatine size to strengthen the paper and to stop ink bleeding into it. They would then be hung up to dry again. Some eighteenth-century engravings show that women worked in the drying lofts, as well as sorting and preparing the rags or the beaters, while each vat was worked by two men, the vatman and coucher.

Once made, the paper had to be transported to the printer, and in the days before railways, this in itself was a major undertaking, given the weight of paper and the distances that there might be between the papermills and the printers, requiring manpower, carts, horses, barges, ships, time and money. The maximum size of the sheets was largely dictated by the span and strength of a man's arms, but a folio-format book of 250 leaves would require 125 sheets of paper, and an octavo just over 30 sheets of paper. This means that an edition of 1500 copies of each would use 187,500 and just under 47,000 sheets respectively. Multiply that by the many thousands of editions in all formats (350,000 by 1600) printed each year across Europe (as well as the massive consumption of paper for personal, commercial, institutional and governmental uses) and the scale of the industry can

be imagined. The cost of the paper was also significant, amounting to half or more (depending on the quality of the paper) of the total cost of the printed sheets.

For deluxe copies, occasionally in the fifteenth century for a whole edition but more probably intended for presentation to a patron or other powerful and important individual, a book might be printed on parchment, or more specifically, in northern Europe, on vellum, the skins of calves, each one, after dehairing and other preparatory processes, worked on a frame, using large knives with circular or semi-circular blades to scrape the skins clean and smooth on the fleshside. When King Philip II of Spain demanded in the 1560s that Christoph Plantin print 13 copies of his *Biblia Real* (the Plantin polyglot bible) in eight folio volumes on vellum, Plantin was able to buy 16,263 skins for this purpose (though even this did not allow the final copies of the *Apparatus* to be printed on vellum). These skins would have been of high quality, free from the blemishes and faults that so easily occur on skins, not only during processing but during the animals' lives, necessitating a selection from even larger numbers of skins. That the parchment-making trade could accommodate such an order is evidence of the size and sophistication of the business, which was also supplying skins for the huge numbers of legal and institutional documents that were written on parchment (mostly sheep rather than the more expensive calf), as well as skins for use by binders as covers for the tens of thousands of

Der Permennter.



2. The Parchmentmaker

standard commercial bindings in which many printed books were sold and read. The production of these skins was therefore big business, and given that the skins would need to be dried or processed into parchment within 24 hours of the removal of the skin from the animal carcass, especially in warm weather, to stop them putrefying, it will be clear that this business was highly organised and must have been concentrated around the sources of supply of the skins, presumably the larger urban centres where huge numbers of animals would be driven for slaughter and consumption. The same would be true of the tanned skins used to cover books, but we shall get ahead of ourselves if we consider them now.

With the paper, or parchment, in hand, the next task was to carry out the printing. For this another interlocking series of activities was required, starting with the type. Here again the hand-labour involved is impressive. Each sort, or piece of type (one for each letter or symbol), was cast by hand in a small hand-held mould into which the molten metal alloy (lead, antimony and tin) was poured. The shapes of the letters and other symbols had already been cut (again by hand by expert metal workers) into steel punches which were driven into small copper bars to create the matrices that were placed at the bottom of the mould. Once cast, the type was trimmed and shaped to a regular height so that it would print evenly across a sheet of paper. Multiple copies of each piece would be required in each of the type sizes required for a book, the number

Der Schriftgiesser.



3. The Type-caster

varying according to the frequency with which each letter or symbol was likely to be used. The quantity of letters in each size would also determine the number of sheets that could be set and printed at any one time.

The type was set by hand, no mean task for the smallest type sizes, and often requiring on the part of the compositor a good knowledge of alphabets other than roman. Each line of type, collected in a composing stick, would need to be justified with thin type-metal spacers to give even margins on each side and then transferred to a wooden or, later, metal tray known as a galley, collecting the lines into long sequences, which could then be printed off to provide galley proofs. Once corrected, the lines of type would be divided into pages, given headers, page numbers and signatures and then transferred to the imposing table, where they would be fitted and then wedged into an iron frame, or chase, which held all the pages to be printed on a single side of paper.

The chase was put on the bed of the press, and the press made ready, to ensure that the type was all at an even height and printing properly. The presses themselves, mostly made of wood with an iron screw and a stone bed and operated by hand, could not only handle only one sheet of paper at a time, the type inked for each impression by hand with a pair of inkballs (tanned dogskin over wadding attached to a wooden handle). In the early years, the platens of the presses were only large

Der Buchdrucker.



4. The Printer

enough to print half a sheet of paper at a time, requiring two pulls for each side of each sheet. Or four pulls to print the sheet on both sides. This was hard, repetitive physical work, but work that also required a great deal of care and attention in setting up the type on the press to produce a good impression each time and careful handling of the sheets to avoid soiling them. The paper had to be dampened before printing to soften the size and allow a better transfer of ink to paper, but once printed, the sheets would need to be hung up to dry – the third time the sheets of paper would have undergone this process.

If the book was to be illustrated, woodblocks or engraved intaglio plates would have to be cut or engraved, and for lavishly illustrated books this was in itself a major undertaking and expense. and special paper might need to be procured for the purpose. When engraved plates were used, these might be printed on separate leaves for insertion into the book, but if the plates were to appear on the same leaves as the printed text, the relevant leaves would have to be put through a rolling press as well, thus greatly increasing the cost of the edition. The use of engraver's plates would also complicate the work of the binder, as the ink used for intaglio plates took much longer to dry and the leaves could not be beaten or pressed until it had dried. For this reason, some printers warned their customers not to have books bound too soon after they were printed, and one publisher in 1783 asked his customers not to have the book bound before

Der Formschneider.



5. The Woodcutter

the end of the year, explaining that it might otherwise be spoiled under the bookbinder's hammer. Colouring, when required, would usually be added by hand.

All of this work, the making of the support material, the procurement of type and the printing, needed large amounts of capital. While short pamphlets might only take a few days to produce, a major illustrated work, such as the Nuremburg Chronicle of 1493, took two years to print, which is two years before there would be any return from the sale of copies on the sizeable investment made in paper, and the time of the printers, artists and wood-engravers. Printers needed financial backing for this type of work, and it is no surprise, therefore, that the success of the new trade in printed books is intimately linked to the development of international trade in the late fifteenth century, and in particular the introduction of bills of exchange which allowed the transfer of funds across Europe through the banking system without requiring the movement of large amounts of coin. The trade in printed books, free of the restrictive practices of the medieval 'mysteries', can be described as one of the first capitalist enterprises, and it is certain that without the involvement of wealthy merchants with experience in the distribution and sale of goods in a European market, it could not have succeeded.

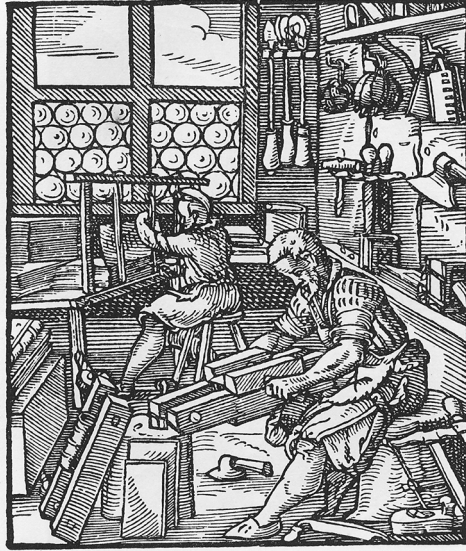
With the sheets printed, the ink dried, and the sheets collated into individual volumes and folded, beaten and

pressed together for storage and transport, they were ready for sale. This might involve shipping them across Europe, as the market for books was necessarily an international one in the earlier years of printing, as the printers sought to create a market that had not existed before for multiple copies of texts. Local markets were too small to allow large and therefore more economical, editions to be printed. For books printed in Latin, the international language of scholarship, however, there were no language barriers to restrict their sale, while books printed in the vernacular languages would necessarily have a more limited market. With the books still in sheets, in the hands of the booksellers who had printed or commissioned them, retail booksellers who bought them for resale or the customers themselves, who would often buy books in sheets, the action moved to the binders' workshops, and here the business of making books opens up in a quite remarkable way.

There is, in theory at least, likely to be a conformity between the different copies in sheets of the same edition of a book. There will be some variations, resulting from stop-press corrections, problems with printing or the use of different qualities and sizes of paper, but essentially the same type of paper printed from the same settings of type will result in near identical copies. When it comes to the bindings, however, there is no such guarantee; indeed it would appear to be more likely that the bindings on copies of the same edition will differ from each other than that

they will be the same. The reasons for this are many, but, at a time when edition bindings were virtually unknown, these would include the different levels of cost and permanence of the bindings that might be chosen for individual copies, for what sort of use a book was bound, who owned the sheets at the moment at which they were bound (whether a retail bookseller, an institutional library or a private customer) and their financial circumstances and in what part of the world they were bound, as styles and techniques of binding varied greatly from one place to another. From the earliest years of printing onwards, it was entirely likely that a book printed in one place might be bound for a customer many hundreds of miles away, as in most cases the making of a permanent binding for a book was more likely to happen at the end of the book's journey to its first customer than at the beginning (where some form of lightweight, temporary binding, if any binding at all, was more likely). We are no longer used to the idea that customers have choice as to the sort of binding they might like on a book (our choice, if we are lucky, is only between paperback and hardback), but it meant that the early-modern bookseller or printer would not be able to predict what sort of permanent bindings might be required for their books, and would not wish to invest money in work that hinder rather than encourage sales. The choice was therefore better left to the customer or retail bookseller.

Der Buchbinder.



6. The Bookbinder

The addition of a binding to a book adds to it another list of materials and processes. A broadside printed in London at the end of the seventeenth century with the title *The Bookbinders Case Unfolded*, and one of several complaints on the part of the binders about how badly they were paid, lists 66 separate operations involved in making a very straightforward, full calf leather binding in boards. Even allowing for a certain amount of over-elaboration (the author was straining to make a point), this represents a lot of work and a wide range of materials, several of which might require a decision on the part of the customer (the choice of decorated papers for the endleaves, the decoration of the edges of the bookblock, the choice of covering skin, the amount and style of any tooled decoration, etc.).

Before a book had to be bound, the leaves had first to be prepared. The binder would have to check that everything required was there and in the right order, before taking groups of folded gatherings and beating them with a 14-pound hammer on a block of smooth stone to compact the leaves which were left uneven by the process of printing and drying. For more expensive work, the leaves might also be ruled with red ink, giving borders to the text areas and underlining important headings. This was work usually done by hand by the binders before the sheets were bound. The next decision involved the endleaves, which might at first sight appear to be a simple matter – a few leaves of paper, some plain and, from the 1620s,

perhaps some decorated, at each end of the bookblock, but the variations possible in the ways in which they were made are astonishing, and that is before the actual choice of leaf material was made. Even before the introduction of decorated papers, the binder (or customer) would have to choose between parchment and paper, the source and quality of either (or, in many cases, both), including the use of recycled materials from old or waste manuscripts and printed books, and the number of leaves. With the arrival of decorated papers, an increasing range of options became available, whether marbled, block-printed, paste-decorated, printed, coloured, sprinkled, gilded, painted, stencilled, embossed, or combinations of more than one of these techniques. What they have in common is that all of them were made, sheet by sheet, by hand, and once created, might then be polished, again by hand. Decorated paper was not always cheap, and the expensive papers (such as the German *Brokatpapieren* of the eighteenth century which were sold all over Europe and beyond) could more than double the cost of a simple stitched pamphlet in a decorated wrapper.

With the endleaves selected, the binder would have to choose how to hold the bookblock together, either by sewing through the folds of the gatherings, tacketing, stitching through the inner margins or even, as early as the 1620s, glueing them together. These were both economic as well as practical decisions, and each offered a myriad of variations: the number of sewing or stitching stations,

supported or unsupported structures, raised, recessed or external, or single or double, supports, longstitch, sewing all-along or multi-section and/or bypass. Given that it could take the best part of day's work to sew a large, thick folio to seven double supports, such decisions were critical. Every part of the binding was open to the use of different materials, each one carrying with it geographical and chronological evidence, as they came in and out of fashion in different parts of Europe at different times. The materials, for instance, used for the supports to which the gatherings of books were sewn vary widely. One of the most commonly used in the fifteenth and sixteenth centuries was white alum-tawed skin, and on late medieval Italian bindings, this material is often found stained pink on the hairside of the thick strap-like supports then in use. The material must have been made for other uses (perhaps for harness for horses or for belts), and was chosen by the binders because of its thickness and degree of flexibility, as colour would not have been a requirement. A variety of colours may also be found on the fleshside of the thin, soft, twisted sewing supports found on seventeenth-century English bindings, a material probably obtained as off-cuts from the gloving or tailoring trades, where this material was also in common use. Tanned skin from both goat and calf could be used for sewing supports, the former exclusively in Italy and the latter across northern Europe. Flat, rolled and twisted parchment was also used, as was cord, the latter in Anglo-Saxon England and not again until the late fifteenth century when it re-appears in

Der Läderer.



7. The Tanner

Germany, though not commonly in the rest of Europe until the seventeenth century.

Some books were sold as sewn textblocks, leaving the next decision, how to cover them, to the retail bookseller or customer who bought them, choosing whether to attach rigid boards or to opt for a limp cover without boards, and what covering material to choose (a choice dictated more by cost than colour). It was also possible to buy books with the boards attached but without a cover, still leaving just the choice of covering material and decoration to the owner.

Many permanent bindings for books intended for library use would have had boards, and in the middle ages and for certain types of book in certain countries until the beginning of the nineteenth century, these were likely to have been made of wood. Depending on where the book was bound these in turn were likely to have been of either beech or oak, though other woods were used, but even here we find unexpected evidence of international trade. Recent research into the wood used for the boards of late-medieval English bindings has revealed the use of Baltic oak, which at first sight would appear to be a case of ‘coals to Newcastle’, as the oak is regarded as the national tree of England. However, the particular requirements of wood used for book boards – to be stable and not to warp in the absence of braces added to one or other side of the board – made the Baltic trees, grown slowly and straight

in dense forests on poor soil, well suited for use as book boards, and also for panels for paintings, where their use is well known. The costs of shipping were no doubt offset by the need to ballast the ships that took wool to the European market for their return journeys to England.

When binders sought a lighter and thinner material for book boards from the late fifteenth century, in reaction to the increasing numbers of small format books then being produced, they copied the Islamic practice of pasting sheets of waste paper together to make pasteboards, resulting in boards containing material from a wide and unpredictable range of sources, from medieval manuscripts to the only known leaves from early printers' and bookbinders' accounts. Such boards had the advantage that they could be made by individual binders, using the waste that came readily to their hands from discarded and incomplete books and archival material from libraries and the booktrade. Early in the sixteenth-century, however, the growth of the booktrade and the economies offered by specialisation, led to the introduction of specially manufactured boards, known today as millboards, which soon replaced the pasteboards. These were made from new paper, often of inferior quality, couched one sheet on top of another in a papermill (hence the name millboard) to make board of the required thickness, the laminations held together by the same process (hydrogen bonding) that held each sheet of paper together. A single board might contain as many as 20 or 30 sheets of paper, each one couched individually

by hand. Once made, the board would have to be shipped to the binders, adding to its cost and the complexity of the transaction.

In England from the second half of the sixteenth century a form of *papier-mâché* was used to make so-called pulp-boards that remained the most popular English board material until the late seventeenth century. There is evidence that these could be made by individual binders from waste paper, leading to a recurrent struggle between the binders and their clients as to how much of the margins of the books was to be cut off when the books were bound, the owners wanting to preserve the margins and the binders looking to obtain as much waste paper as possible from which to make boards (some 25% of the margins of small-format books might be removed when the edges were cut). As a result customers would sometimes leave instructions to binders with injunctions such as “cut as little as may be round about”. Cutting the edges of the bookblocks so that a few of the slightly shorter sheets retained their deckle edges was known as ‘cutting to show proof’ – proof, that is, to the client that the minimum amount necessary to give a good edge had been cut from the bookblock, and no more. Pulp boards can often be found to contain the miscellaneous fragments of material such as quill trimmings, splinters of wood, metal pins and pieces of textile that also ended up in the tub below the cutting press, which seems to have been used as a waste bin.

At the end of the seventeenth century in England, pulp boards were replaced by millboard made from rope-fibre, recycled from discarded ships' rigging, of which, in a maritime nation like Britain, there must have been large quantities available. It was used across Europe as a raw material for making cheap, coarse, wrapping paper (the amount of paper made for uses other than writing and printing was huge and largely lost to us today), and the tar used on the rope on the ships to protect it from insects and the elements gave it a characteristic brown colour, the reason that paper bags are still traditionally brown. It would appear, however, that only in England was it turned into book boards, where it continued to be manufactured until the outbreak of the Second World War.

The most conspicuous, but often little understood, part of most bindings is the material used for the covers. Indeed, bindings will often be defined by their covering material, such as 'leather-bound', or 'in a parchment binding', though such terms ignore the structures that lie beneath the cover and are often less than helpful. At the top end of the trade, working for the wealthiest customers, binders had a wide range of exotic, often imported, materials. Before the introduction in the fifteenth century of the imported, tanned and richly-coloured goatskins known as morocco leather, the covering of choice would have been a rich silk textile, perhaps a brocade or a handcut velvet. These are best known from paintings of the late medieval period, as the originals have all too often perished, though

the use of velvet survived in an unbroken tradition to the nineteenth century for presentation and other special bindings. The introduction in the second half of the fifteenth century of the reassuringly expensive and brightly coloured imported goatskins from Morocco (hence their name) coincided with the introduction of gold-tooling (the use of both appears to have been learnt from the Mameluke binders in Egypt, together with the use of pasteboards) and gave wealthy customers a material and a form of decoration that suited their tastes, their deep pockets and perhaps, on occasion, their pretensions. In England, whose merchants in the seventeenth century were required to trade with the Ottoman Empire through the port of Smyrna (modern Izmir), the same skins were known as turkey leather. When English binders in the early eighteenth century began to use inferior-quality skins from hair-sheep bought directly from Morocco, they called it morocco leather (the naming of skins after the country from which they were imported seems to have been a tradition of the leather trade) and for most of the rest of the century made a clear distinction between turkey and morocco skins. This means, rather confusingly, that English morocco leather and French morocco leather are entirely different materials.

Another expensive imported skin was known as Russia calf, brought from Saint Petersburg which was the centre of its manufacture. This thick skin with its characteristic red-brown colour, scent of birch-tar oil and lattice of thin

lines impressed into its surface was highly fashionable in the eighteenth and early nineteenth centuries, but it is only recently that we have learnt that the calves from which the skins were taken were those of the herds of reindeer that were driven to Saint Petersburg across the northern steppes each year to be slaughtered. The identification came from the thousands of skins discovered in the wreck of a ship by the name of the *Metta Catharina* which sank in a storm in the roads off Plymouth Harbour in December 1786, en route to Genoa.

Only the wealthy could afford to have their books covered in these expensive, imported skins, and most book-buyers would have had to be content with the skins of familiar domestic animals such as sheep, calves and pigs, which alone were available in the quantity and consistency required for large-scale work. At this point the making of books intersected with another phenomenon, national diet, which is not often associated with books. However, such animals were not grown for their skins but rather for food, and the skins were a useful by-product. The British, a traditionally beef-eating nation, therefore had access to large amounts of calf skin, though probably the consumption of mutton provided the larger numbers of books with their covers, as it was the material most often selected for the cheapest and most numerous books, the majority of which have been lost, as they were not books that would often be preserved in formal libraries. The inevitable association of cheap sheeps' leather with cheap

books led to the binders of such books, not noted for the finesse of their workmanship (they were not paid enough to be careful), to be known as ‘mutton thumpers’. In Germany, it was the national preference for pork that resulted in the thousands of books covered in white alum-tawed pigskin that are to be found in so many German collections, though their parchment bindings are mostly found in calf parchment (i.e. vellum) as pigskin was too thick and tough to work well when turned into parchment.

Paper, both plain and coloured or decorated, was always a cheaper option and was used from the late fifteenth century onwards, but is found increasingly commonly from the mid-eighteenth century, when there was shortage of leather and a consequent rise in its price. The same phenomenon led to the introduction of a coarse linen canvas as a substitute for leather for the cheapest schoolbooks and devotional works in the 1760s, evidence of the booktrade constantly looking for new ways to control costs and get books into the hands of their customers at the best possible price.

There is no room in this rapid review of bookbinding to look at the full variety of materials, structures and techniques used to make them, nor is there space to discuss the range of techniques used to decorate the covers of books, beyond making the point that the vast

Der Golttschlager.



8. The Goldbeater

majority of the brass finishing tools used by binders to impress the designs into the covers of book would have been cut by hand and the gold or other metallic leaf used with them was all beaten by hand, sheet by sheet. We must, however, consider the vast number of books that never made it onto library shelves, at least not until they became so rare that they achieved a financial and historical value that they never had when new. These books constituted the financial mainstay of much the publishing and book-making trades, yet are hardly visible today. Chief amongst them would be schoolbooks, used and worn out by generations of schoolboys and discarded, to be replaced by new copies from the huge editions in which these books were printed. The first book printed by Gutenberg, and therefore the first ever printed, was probably a copy of the popular school grammar, the Donatus, of which not a single copy has survived. School books were paralleled by equally large numbers of liturgical and devotional books that even the poorest literate people might own, including, in the protestant world, prayer books, psalters and bibles, with books of hours and breviaries for the Catholics, and the many editions of Bunyan for the dissenting world. There was also a constant demand for pamphlets and newsheets of all sorts, whether religious, political, historical or scandalous, few of which have survived, or were ever intended to be preserved. They were popular with printers as they were cheap and quick to print, and produced a rapid return on the cost of making them. By the end of

Der Kauffmann.



9. The Merchant

the eighteenth century, there was also a growing market for children's books, another category of book that seldom found its way into formal libraries. One type of book that rarely got even as far as the domestic bookshelf was the almanac, a very profitable property published in tens of thousands and often bound to be kept in the pocket, with the great commercial advantage that they would need to be replaced each year by a new one. Some binders even specialised in making elegant little bindings for these books, calling themselves 'pocket book makers' or even 'fancy pocket book makers'.

There was also a constant demand for blank books of all sorts and sizes, for personal as well as business use. It is said that the English 'vellum binders' (as the makers of these books called themselves) made a very good living from the increased demand for blank record books from the army and navy during the Napoleonic wars, but the growth of London and other major commercial centres would also have consumed such books in huge numbers, and what was true of England would have been true to a greater or lesser extent of all the other European countries too. This was not work undertaken by the booksellers, though they would all have used such books in which to keep their accounts, and it was the schoolbooks, the religious books, the pamphlets, the children's books and the almanacs that were the most reliably profitable products of the booktrade, printed and sold in numbers few other books could match. Without

them, the booktrade could not have developed and grown as it did, and all of them had to be bound, whether in simple stitched paper wrappers or elaborately decorated leather covers over boards, or anything in between. It is hard now to appreciate the significance and ubiquity of these sorts of book, as the great majority, in some cases all copies, have simply disappeared, discarded when no longer required, and mostly preserved, where they survive at all, by accident or neglect or known only from records of their having once been printed or sold.

What we see today on library shelves is therefore only one part of the booktrade, and if we think, when surveying the orderly shelves of an academic library, with row upon row of similar-looking books, that the world of books from the fifteenth to the nineteenth century was an equally orderly business, we would be very much mistaken. It was in reality a sprawling, diverse, often uncertain, commercial phenomenon, sustained by a disparate collection of craftsmen with connections deep into a variety of manufacturing trades, often on the move, often out of work, doing their best to make a living out of a volatile market. At one end, they might be making high-quality works of great beauty and lasting worth, and at the other, pumping out badly-printed, cheaply-bound ephemera, and doing it in an ever-surprising and ever-widening variety of ways. It is the job of the historian to try to make sense of it all, which for me means trying to define that small part of this irrepressible, teeming world

of books that consists of the structures and materials of bindings, and this has proven to be no easy task. There can be no history until you can describe it, and we have found the established terms used to describe bindings all too often to be inadequate, perhaps because used in contradictory senses by different people, or too vaguely to have useful meaning, or are too recent to include more ancient phenomena. Sometimes, well-established terms turn out on further examination to be misleading or just plain wrong. All too often, the binders who bound these books, perhaps in the most part largely illiterate but who must have had words to describe what they were doing, have not left us any hint of what they called them, forcing us to invent new terms to describe once familiar components and processes. Structures and materials unique to individual countries will perhaps never have had terms in other languages, even where they survive in their native ones. It has been the task of the Ligatus Glossary Project to try to tame this unruly world, and it is the story of how we are setting about this task, and what we have found along the way, that is the subject of this Platform Lecture.

Nicholas Pickwoad
December 2010

Illustrations

Hans Sachs, Eygentliche Beschreibung aller Stände auff Erden, hoher vnd nidriger, geistlicher vnd weltlicher, aller Künsten, Handwercken vnd Händeln &c. vom grösten biss zum kleinsten, auch von jrem Vrsprung, Erfindung vnd gebreuchen von dem weitberümpften Hans Sachsen ganz fleissig beschrieben vnd in Teutsche Reimen gefasset, sehr nutzbarlich vnd lustig zu lesen, vnd auch mit kunstreichen figuren, deren gleichen zuvor niemands gesehen ... allen Künstlern ... zu sonderlichem Dienst in Druck verfertigt, Frankfurt: by Georg Raben for Sigmund Feyerabents, 1568, with woodcuts by Jost Amman (reproduced from Das Ständebuch. 114 holzschnitte von Jost Amman mit Reimen von Hans Sachs, Leipzig: Insel Verlag, n.d.)

1. The Papermaker.

The stamper-beaters used to macerate the rags can be seen on the left, with the two water-wheels which power them visible through the windows. The vat containing the paper pulp can be seen in the right foreground, the vatman standing behind it with a paper mould in his hands; behind him is a large screw-operated standing press used to squeeze water out of the newly-made paper.

2. The Parchmentmaker.

The parchmentmaker is shown using a circular knife to scrape clean the fleshside of a wet skin attached to a

wooden frame, or herse. Two finished skins can be seen on the left, still attached to the frames in which they are pulled flat as the skins dry and shrink. In front of them is a tub used to soak the skins before processing them with the knife.

3. The Type-caster.

The type-caster sits in front of a small furnace on which the type metal is melted, and pours a small quantity of molten metal from a ladle into a type-mould held in his left hand. A bowl by his right foot holds the type already cast, while fuel for the furnace and a pair of bellows can be seen on the right.

4. The Printer.

The wooden press is shown with the stone bed wound out, the tympan opened to allow a sheet just printed to be removed from it (the frisket, which holds the paper to the tympan and which has two openings cut out of it, one for each page being printed, is hinged away from the tympan to the left) and the type to be inked for a new impression with a pair of inkballs. In the background two compositors set type in front of type-trays set at an angle, with the text to be set mounted on posts beside the type trays. In the foreground there are two piles of paper, unprinted sheets to the right and printed sheets to the left.

5. The Woodcutter.

The woodcutter sits at an angled bench placed in front of a window, and cuts the lines of a design or drawing into a woodblock with a small knife. The thickness of the woodblock would have been the same as the height of the type, to allow the two to be printed together.

6. The Bookbinder.

Two men are shown at work. In the background a man is seen sewing a book to two double cords attached to a sewing frame which is part of the table on which it sits. At the back of the table can be seen piles of gatherings waiting to be sewn. A beating hammer lies in the centre, on the floor below the cutting press and plough being operated by the other workman as he cuts the edges of a sewn bookblock. Woodworking tools for wooden boards can be seen on the floor to the right, while a covered book can be seen in a press to the left. Other tools and materials, including an axe, tying-up boards, spools of cord and thread, files, and an auger hang on the wall to the right, while two rolls for tooling leather and a polishing iron can be seen to the right of the window.

7. The Tanner.

The tanner stands in an open shed close to a river, behind a rounded wooden board, or beam, cleaning a skin with a curved knife, while his colleague treads skins in water in an enclosure made of wattles. Unprocessed pelts hang over the wooden beam to the right of the picture.

8. The Goldbeater.

On the left, the goldbeater, his beating hammer raised in his right hand, beats a square of gold foil between sheets of goldbeaters' skin (an animal membrane) on the beating stone, while his colleague places beaten leaves in small books, using a pair of wooden tweezers to avoid touching the gold leaf with his fingers. The iron door of a safe in which to keep the gold can be seen in the back wall of the room.

9. The Merchant.

The woodcut shows two men, one standing on each side of two large bales covered in canvas, tied with rope and marked with merchant's marks. Books in sheets were often shipped in this way across Europe (the alternative was in wooden barrels), and publishing relied to a large extent on the capital provided by the wealthier merchants, one of whom is shown standing to the right, with his sword and fur-lined short cloak.

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