seductive.

here are a lot of book fetishists about these days, it seems. In the digital era, it's the physical details that increasingly interest us, as we linger over stab-stitching, endpapers, watermarks, leather-tooling. But the closer you get to the book, the stranger it appears. You need to look twice, for instance, at the photographs that illustrate Franziska Morlok and Miriam Waszelewski's Bookbinding: The complete guide to folding, sewing and binding. They show the book from odd, close-up angles, so it's not always clear what we're seeing. On the surface this is a practical manual, but its sleek presentation gives it away as a coffeetable book aimed at a new demographic of millennial book nerds with a finely tuned sense of style, into book fondling as much as book making. Filled with pared-down technical diagrams of construction methods, it presents the book not as a textual medium but as an elegant design object. Saddle- or side-stitched; cross or parallel folded; spiral, half or full bound - the permutations are endless and the technical minutiae

Georgios Boudalis's The Codex and Crafts in Late Antiquity is similarly concerned with the nuts and bolts of the book, this time from a historical perspective. Boudalis traces the codex the familiar bound book format – back to its origin in the ancient world, examining the host of precursors and near-neighbours from which it emerged. He is a historian of the hands-on variety, the head of a book and paper conservation laboratory at the University of Byzantine Culture. Thessaloníki. His extensive field research in libraries, archaeological collections and monasteries has resulted in a volume dense with technical information. For the non-specialist, the way in is through the wealth of images and the "iconic evidence" of frescoes, mosaics and sculpture. A wall painting from the tomb of Trebius Iustus in Rome shows the young Trebius, in around 300 AD, surrounded by all kinds of different written media: a capsa or container of scrolls, wax tablets and folded leaves of parchment. "Book" could still mean many different things in Late Antiquity, shows Boudalis. But two centuries later, images of the evangelists in the Basilica Vitale in Ravenna demonstrate the adoption of the codex and - more importantly - its construction. Sts Mark and Luke brandish the open pages of their bound gospels, showing the stitching and the straps used to seal them. There are also many practical diagrams, not dissimilar to those in Morlok and Waszelewski's bookbinding manual. With careful attention, you could probably manufacture a codex in the same manner as a fourthcentury monk. And indeed, Boudalis did just that, since this book was published to accompany an exhibition at Bard College, New York, that contained replicas of the early codex. Images of these blank dummy books remind us of the word's Latin source – caudex, meaning "block of wood".

Get beyond the technicalities, though, and Boudalis has some surprising things to say about the origins of the codex. It supplanted the scroll between the second and sixth centuries AD but did not emerge *sui generis* as a gamechanging invention. Rather, it was a sideways move, adapting not only existing writing technologies – tablets and parchment – but also socks, baskets, shoes and belts. Such utilitarian objects were made using the same techniques of weaving, stitching and leatherwork – and often the same craftspeople – as the "multi-gathering codex". The distinctive "coptic knitting" used

Box of tricks

The shifting identity of the book

GILL PARTINGTON

Franziska Morlok and Miriam Waszelewski

BOOKBINDING

The complete guide to folding, sewing and binding 420pp. Laurence King. £45.

978 1 78627 168 6

Georgios Boudalis

THE CODEX AND CRAFTS
IN LATE ANTIQUITY
200pp. University of Chicago Press.
£22.50 (US \$30).
978 1 941792 12 4

The Multigraph Collective

INTERACTING WITH PRINT Elements of reading in the era of print saturation 416pp. University of Chicago Press. £34 (US \$45).

978 0 226 46914 0 Amaranth Borsuk

THE BOOK 244pp. MIT Press. Paperback, £11.99 (US \$15.95). 978 0 262 53541 0

to make socks was adapted to stitch pages together, while weaving techniques of ancient Egyptian curtain fabrics are also found in endbands at the top and tail of the book's spine. Seeing these items side by side gives us a fresh perspective on the book: it's a craft artefact, as Boudalis argues, anchored in the material culture of the ancient world. This allows some illuminating connections to be made. The Tollund Man, found in a Danish bog in 1950, was strangled in the fourth century with the kind of leather strap that fastened many early books, while the technique of lacing – threading parchment strips through leather – decorates not only book covers but also Tutankhamen's sandals.

Interacting with Print: Elements of reading in the era of print saturation concerns itself with medium rather than technical structure, but knocks the book from its pedestal in similar ways. It explores the often-inventive strategies developed by eighteenth- and nineteenth-century readers to navigate an expanding, rapidly circulating "ecology" of print: newspapers, broadsides, periodicals, engravings, advertisements, forms and pamphlets. And books too, of course, although these appear in a new light. Oddly decentred, they are routinely transformed, cut up, folded, glued and reused by their readers, who seem to be doing many things with print, but seldom ever just reading it.

To "Grangerize" a book was to customize it by adding engravings, illustrations and clippings; the term comes from the biographer James Granger (1723–76), whose books were subjected to the practice. In this account, it seems emblematic of whole set of behaviours. It wasn't only printed paper that was recruited in this way, but objects, too. An edition of Thomas Gray's poems, published in Glasgow in 1798 and now held by the Morgan Library, New York, has a recess in the cover, presumably a DIY adaptation by an unknown owner. In it is a



twig, supposedly from the very tree mentioned in Gray's "Elegy". The Coram Foundation archives hold a book of printed admission forms for the Foundling Hospital in London. Pinned to one leaf is a swatch from a piece of clothing – retained in case the mother could one day return to claim her child.

The cumulative effect makes the book seem a strange box of tricks, with multiple flaps, layers, compartments and textures – something to be read with the hands as much as the eye. But what emerges most powerfully here are the traces left by its users; it's a vivid account of real lives and longings that disrupts top-down notions of standardization and fixity. A book's pages are always threatening to disperse back into a blizzard of printed artefacts, it seems; and Grangerization ensures that borders are crossed between different national literatures, between text and image, and between high and low.

If its overall theme is connectivity, then Interacting with Print makes some innovative connections of its own. It's a "multigraph", written by a collective of twenty-two academics, who passed the text back and forth for editing and additions. Resisting the academy's increasing culture of individual competition, this format emphasizes the fact that research is necessarily a collaborative enterprise. There is no separation between the work of its various contributors (we don't know who wrote what), and although there are thematic divisions, with chapters on binding, anthologies, paper, indexes and advertisements, for example, these are linked to one another throughout by bracketed keywords, which lend the logic of the hyperlink to the printed book.

The title of Amaranth Borsuk's *The Book* seems to signal directness rather than oblique angles, promising to give us the whole thing rather than its parts. In fact, it divides the book into no fewer than four distinct aspects, giving us meditations on the book as "Object", "Content", "Idea" and "Interface". But the structure is as much chronological as thematic, and the first two chapters are really a potted history – a brisk canter through several millennia, cover-

ing some of the material Boudalis covers, but in much broader strokes. Rather than deal with the knotty problem of the book's definition by narrowing its parameters, this study takes the opposite tack, widening them as far as possible to incorporate all forms of writing: cuneiform tablets and papyrus scrolls, but also South American quipus or knotted string records, Sumerian clay bullae or spherical "envelopes", and Chinese bamboo strips.

This is an easy, enjoyable account, the latest in the MIT Essential Knowledge series, which condenses hot topics into pocket-sized volumes. The first half of this one serves as an engaging and useful primer, full of intriguing bibliographic snippets and splashes of historical colour. The term "role" is a legacy of the roll, or scroll on which actors' parts were written in the Renaissance, for instance, while the moulds from which type is cast were called matrices (mother) and the resulting type patrices (father). In the final chapter Borsuk brings this historical survey up to date, examining the evolution of the ebook via some quirky routes and blind alleys. We learn about the hypothetical "Memex" machine, described by Vannevar Bush in an article in the Atlantic Monthly in 1945; a sort of multi-media desk, it would allow users to view thousands of books and images all stored on microfilm. A decade earlier, Bob Brown had imagined the "readies" - equivalent to the movies - which would mechanically scroll a continuous line of text, obviating the need for readers to turn pages. This is a lot of ground to cover in a short study, sometimes at the expense of nuance (arguably, the ebook is still an object, even if it isn't made of ink and paper; and perhaps the page has always been an interface). But it's in the third chapter - "the book as idea" - that this study shifts a gear, developing into something more substantial. Here the focus is on a particular genre: the artist's book. This is Borsuk's real specialism she's a practising artist as well as a theorist – and it shows. This, too, has the feel of a survey, but a more necessary one, bringing to light some fascinating material that will be unfamiliar to many readers. We encounter Dieter Roth's infamous "Literaturwurst", sausages made out of the minced pages of Hegel; Alison Knowles's "Big Book", an 8-foot-tall codex that the reader could physically enter; and Xu Bing's 'Tobacco Book", which consisted of pages of compressed tobacco gradually consumed by beetles, highlighting the ephemerality of the physical page.

It's tempting to wonder if all the historical backstory was strictly necessary, given that The Book's major strength is as an introduction to artists' books. But placing them at the centre of a bigger story is an interesting move. Normally, they are footnotes in book history, outliers and exceptions belonging to the world of art rather than "real" books. Here they provide the meat of the argument, as important artefacts. Borsuk presents them as thought experiments which probe the book's limits, and her most valuable intervention is in using them to shift our perspective. It becomes clear at this point that her title has an invisible question mark attached to it. She is in the business of questioning rather than defining the book, a project that breaks out of the covers onto a website, t-h-e-b-o-o-k.com, where 200 artists, academics and writers have provided her with their own definitions. Their variety points to a protean, elusive entity. What is a book? Well, that depends on your perspective.

Very time we scroll down a page on our smartphones or computers, we are evoking a medieval practice: the unrolling of a piece of parchment. That the action of scrolling has resurfaced in the twenty-first century bears witness to the remarkable resilience of a format that, paradoxically, was already outdated in the medieval period.

Scrolls were the standard format for written works in the West (and beyond) throughout antiquity. From the fourth century on, however, the scroll was superseded by the codex, the format we still use today: pages bound together that can be inscribed on both sides and turned. Although the codex was superior in many respects (it was easier to look things up in a substantial work, for example), scrolls continued to play a major role in medieval culture. In researching his lively book *The Role of the Scroll*, Thomas Forrest Kelly searched for scrolls and found about 600 in Latin and the European vernaculars, not counting the mass of scrolls used for record-keeping. Why use the scroll, he wondered, if you could make a book?

The reasons Kelly adduces all point to a fascinating combination of practicality and a functionality only scrolls could achieve: they were variable in size (they ranged from tiny charm rolls that could be hidden in amulets to huge and imposing royal documents); one

Endless scrolling

The practical virtues of a medieval format

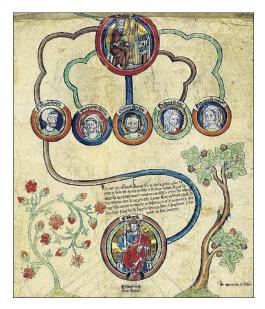
EVA VON CONTZEN

Thomas Forrest Kelly

THE ROLE OF THE SCROLL
An illustrated introduction to scrolls
in the Middle Ages
272pp. Norton. £22.

could extend them almost ad infinitum; and they comfortably accommodated sprawling diagrams and large pictures. Poets and reciters used them, as did musicians; they were particularly useful for polyphonic music. In religious contexts, prayer rolls such as those of the *Arma Christi* were common; these were intended for meditation on the instruments of Christ's passion, and they often contained images.

By far the largest group of medieval scrolls were those made for administrative purposes, since new information could be added readily. The official financial records kept by the



Caption here

Exchequer were known as pipe rolls: several documents in scroll format were put on a stack and rolled into the shape of a pipe. In the

late thirteenth century, the office of the Master of the Rolls was created; the person who occupied it oversaw the record-keeping of the Chancery court (the office survives as the second most senior judge in England and Wales). Elaborate scrolls were made to keep track of New Year gifts: in Elizabethan England, they contained information on the donors (in descending order of their standing), the person who had to take care of the gift, and its value. It is thanks to such scrolls that we know that, in 1559, Queen Elizabeth was given a two-year-old lion.

Scrolls could also be used to create "chain mails": mortuary rolls, containing the official announcement of a cleric's imminent death, were carried across the country by a roll-bearer so that other convents and monasteries were informed and could add their prayers. One such roll-bearer, who was sent to announce the death of Jean II de Marigny, abbot of St Étienne in Dijon, managed to visit 516 churches in a year.

There are many beautiful images here: we are able to study scrolls containing recipes – culinary, medical, magical and alchemical (some of them were lavishly illustrated); rolls of arms; maps for pilgrimages; and royal genealogies. What almost all medieval scrolls have in common is their lists; scrolls created the perfect space for making and keeping them.