## Why bind?

 I new testament" documenting the organization's president's tenure, the organization's president's tenure, the

+ The book is over 2500 pages emphasizing the massive amount of work that went into the 11 year project
+ The binding was completed by a specialist who was able to translate traditional binding methods into an exaggerated $12 "$ thick volume


100 BC

+ The craft of bookbinding probably originated in India, where religious sutras were copied on to palm leaves (cut into two, lengthwise) with a metal stylus. The leaf was then dried and rubbed with ink, which would form a stain in the wound.
+ The finished leaves were given numbers, and two long twines were threaded through each end through wooden boards, making a palm-leaf book. When the book was closed, the excess twine would be wrapped around the boards to protect the manuscript leaves.
+ Buddhist monks took the idea through Persia, Afghanistan, and Iran, to China in the first century BC.


+ Longer texts developed in the Hellenistic/Roman Era and were recorded on scrolls
+ Single scroll wraps over 30 pages of text around a single core
+ The problem being that the reader had to start at the beginning and move through the document until you reach the end
+ The word volume, from the Latin word volvere ("to roll"), comes from these scrolls

+ Scrolls can be rolled in one of two ways. The first method is to wrap the scroll around a single core, similar to a modern roll of paper towels. While simple to construct, a single core scroll has a major disadvantage: in order to read text at the end of the scroll, the entire scroll must be unwound
+ This is partially overcome in the second method, which is to wrap the scroll around two cores, as in a Torah With a double scroll, the text can be accessed from both beginning and end, and the portions of the scroll not being read can remain wound

+ In addition to the scroll, wax tablets were commonly used in Antiquity as a writing surface.
+ Diptychs and later polyptych formats were often hinged together along one edge, analogous to the spine of modern books.
+ Such a set of simple wooden boards sewn together was called by the Romans a codex from the Latin word caudex, meaning 'the trunk' of a tree, around the first century AD

+ Codices were a significant improvement over papyrus or vellum scrolls in that they were easier to handle. However, despite allowing writing on both sides of the leaves, they were still foliated-numbered on the leaves, like the Indian books.
+ The idea spread quickly through the early churches, and the word Bible comes from the town where the Byzantine monks established their first scriptorium, Byblos, in modern Lebanon.
+ The idea of numbering each side of the page-Latin pagina, "to fasten"-appeared when the text of the individual testaments of the Bible were combined and text had to be searched through more quickly.



## 5th Century

+ Western books from the fifth century onwards were bound between hard covers, with pages made from parchment folded and sewn on to strong cords or ligaments that were attached to wooden boards and covered with leather.
+ Since early books were exclusively handwritten on handmade materials, sizes and styles varied considerably, and there was no standard of uniformity.
+ Early and medieval codices were bound with flat spines, and it was not until the fifteenth century that books began to have the rounded spines associated with hardcovers today

+ Stamped and handtooled bindings became more and more elaborate from about 700 to 1500 . They are referred to as treasure bindings, and although many of the jeweled covers were dismantled and used for other purposes, the several of the carved ivory covers remain.


1500 AD

+ By 1500 , printing presses were operating across Europe and completely changed the nature of the book. Once a precious and individual work of art, books became machined and reproducable objects. Binding also followed suit.



## Technique

 hardcover books. Printed sheets in the form of signatures are fastened together, and a hard front and back cover and spine are attached.

+ Smyth Sewn: the thread is driven "through the fold" of a signature Smyth sewn books lay flat very icely and are widely used for coffee table style art and children's books. Smyth Sewing will usually not be the first choice because digital presses are better for delivering single sheet collated book blocks rather than signatures.
+ Side sewn (also called oversewn): a method of binding sometimes hear referred to as: "Reinforced Library Binding". Used for thinner cased books ranging from $3 / 8$ " thickness or less. This method of binding is very strong and secure. The drawback is the margins of oversewn books are reduced and the pages will not lie flat when opened.


SMYTH SEWN
SIDE SEWN



Smyth Sewn Textblock




+ This is a thermal process
+ Generally for paperback books or books run on a digital press in single sheets
+ The sections are milled in the back and notches are applied into the spine to allow hot glue to penetrate into the spine of the book. The textblock is then attached to the cover or "case" which is made of cardboard covered with paper, cloth, vinyl or leather. The other three sides are then face trimmed.




## SIDE STITCH

+ The pages are cut all the same size and stacked, then staples are inserted down the side of one edge of the book's front, 2 to 3 times depending on thickness and paper weight
+ The result is a sturdy binding, however the book will not lie flat when opened
+ This binding style is generally less expressive than other styles
+ Used for Note Pads,
+ Tear-off Calendars, Reports


+ The pages are folded and inserted into a folded cover, then stapled through the fold along the spine
+ This style is suitable for both selfcovered books (where the cover stock, or paper, is the same as the text), and books with separate covers.
+ Generally the maximum number of pages is 96


## + Used for Magazines,

+ Small Soft Covered Books, Brochure


Hella Jongerius: MISFIT Designed by Irma Boom
(Sewn)



+ The book is punched with a series of small holes on the left. A coil binding then is screwed into those holes from one end of the book to the other
+ The binding may be made of either plastic or wire and allow the printed document to lie flat and to double over
+ Spiral wire coils range from $1 / 4$ inch to 2 inches in diameter and can bind books of up to 24 inches in length
+ Typically used for Technical manuals,
+ Presentations, Notebooks,
+ Calendars

+ This binding holds the pages of the book in place by a double-loop wire inserted through holes on the left edge
+ It does not spiral through the book rather it creates a wire comb
+ The pages lay flat when opened and can rotate 360 degree
+ Wire-O bindings are durable, but do not permit printing on the spine
+ Typical uses are Reference books,
+ Reports, Cook books,
+ Proposals

+ One of the cheapest options of bindings, however, they are usually inserted by hand which can be costly for large quantities
+ They are made of lightweight plastic that can be used for books up to 3 inches thick
+ The style allows the pages to lie flat when open, and you can easily add or subtract pages
+ These bindings are the most susceptible to damage
+ Typically used for Reports
+ Presentations, Formal Documents

+ The back cover folds back onto itself and wraps around the spine (either tape, spiral, comb, or double ring) and over onto the front
+ Alternative to case or perfect binding and easily achieved in a short amount of time

+ Uses a strip of tape or plastic strips fused with heat to bind loose pages together
+ One of the advantages of thermal binding is that it allows documents to lay flat when opened, is sturdy, and neat. If you use covers with thermal binding you can match the tape to the cover for a sleek, almost invisible look or use contrasting colors, making the tape appear less utilitarian and more like a design element for the outside of the book or report.



+ This style has a cover and back similar to a hardcover book, 2 to 3 screws are used along the left to bind the cover content and spine together
+ A post binding method can be disassembled and pages can be added or removed
+ Typical uses are Photo Albums,
+ Thesis Papers, Presentations



Perfect Bound book has two well printed hardcover boards glued on both the front and back covers



