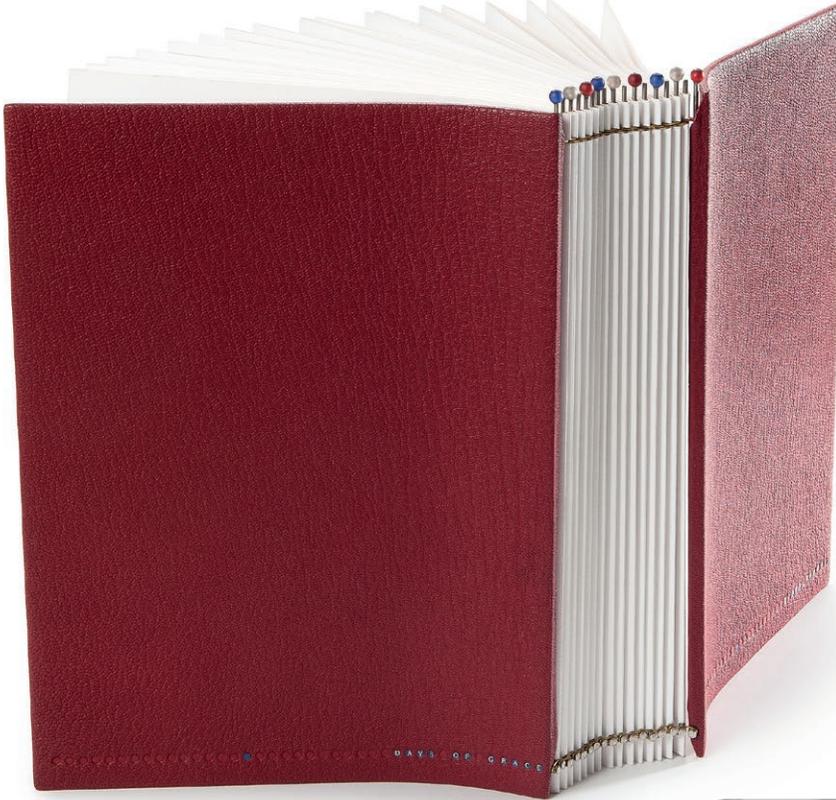


WOVEN STRUCTURE BINDING

THE EVOLUTION OF AN APPROACH

by Jan Zimmerlich



Figs 1 & 2. *Days of Grace*.

Alongside my usual daily work as an independent professional bookbinder, I like to experiment with the mechanical aspects of traditional bindings, questioning and modifying them in order to develop something new. What follows is an attempt to describe the research that went into the evolution of a new binding style that I call the 'woven structure' binding.

It was the set book for the Scripta Manent II Competition, held in Tallinn by the Estonian Association of Designer Bookbinders in 2000, that provided the inspiration for a new approach. This was the Estonian poet Doris Kareva's *Days of Grace*, the 'cyclic' verses of which gave me the idea of creating a book around the totally non-bookbinding material of bicycle spokes [Fig. 1]. I placed a spoke in the fold of each signature, and these were held together at the head and tail of the spine with small brass chains. Alternate spokes at the head were finished with coloured synthetic beads [Fig. 2].





Figs 3 & 4.
*Europos Kostiumo
 Tūkstantmetis.*



The title was blocked, letter by letter, onto individual onlays of blue paper. *Days of Grace* proved to me that it was possible to put signatures together without glue or thread and provided an important foundation for the experimentation that followed.

A few months later, in 2001, I accepted a new challenge in the form of the set book for the Knyga/Book Competition in Vilnius, Lithuania. The book, *Europos Kostiumo Tūkstantmetis*, by Ruta Guzeviciute, was about the history of fashion in Lithuania. I chose long needles as an appropriate, but challenging, support and arrived at a satisfying and very flexible result [Fig. 3]. This time, instead of small chains, I wove leather tapes round the needles and finished the ends with stone beads at both head and tail [Fig. 4]. I blind blocked the title on a leather tape across the spine.

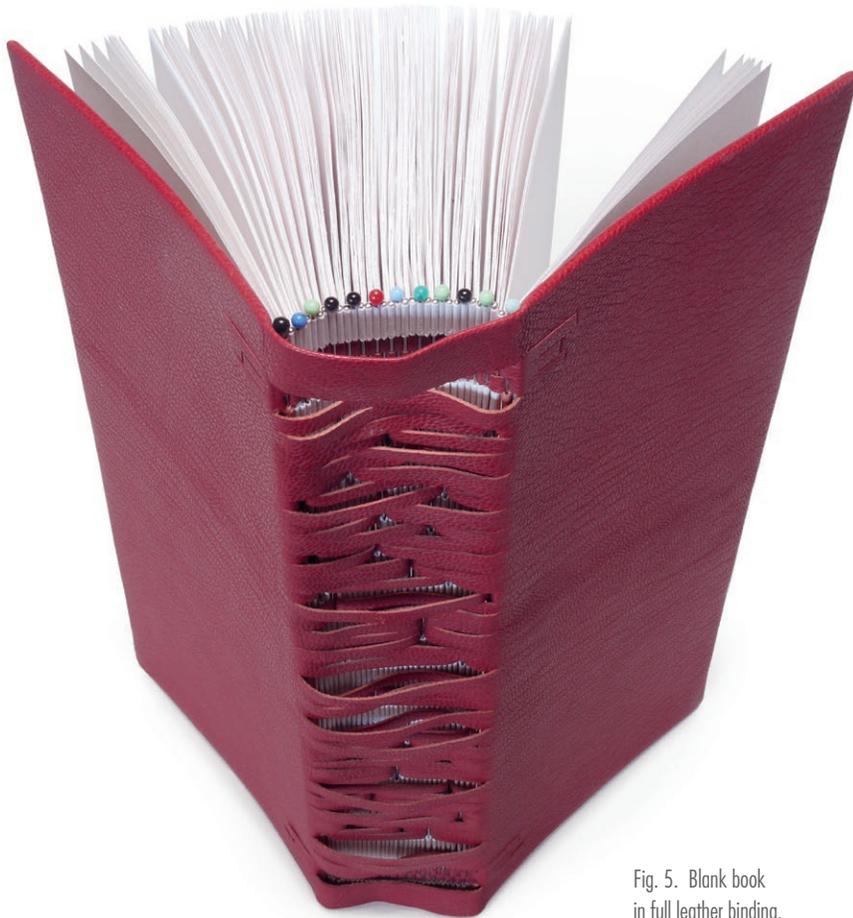


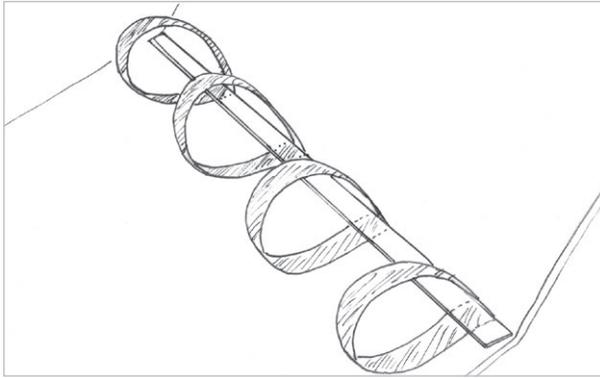
Fig. 5. Blank book
in full leather binding.

Some months later, I applied a variation of this needle technique on a blank book in a full-leather binding. This variation is more stable than the binding on the fashion book because I placed needles halfway up some signatures as well as at the top and bottom. However, the loose leather strips on the spine make it very fragile [Fig. 5].

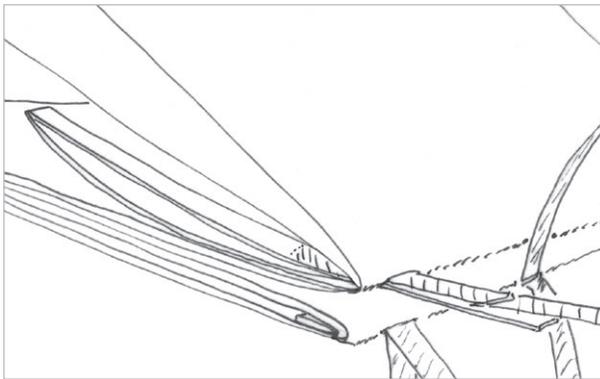
One of the aims of the 'Bel Libro' competition hosted by the Centro del Bel Libro in Ascona in 2003, was to encourage innovation in fine binding. The set book for this competition, an edition of *The Song of Songs which is Solomon's* in which the text is translated into five languages,¹ came at just the right moment in my research. I was very

much inspired by this fine small volume and Kaspar Mühlemann's typography to create a binding that kept to the limitations I had established for myself of not using adhesives or thread.

This led me to develop my first 'woven structure' binding where, instead of bicycle spokes or long needles, I placed narrow strips of thin polyethylene along the fold of each signature. I had previously made four vertical slits in each fold through which I inserted weaving tapes of 300gsm album card. I wove these tapes around the polyethylene strips [Diag. 1], and then



Diag. 1. The tapes woven around the polyethylene strips.



Diag. 2. The tapes pushed in and out again through the slits.

pushed them out again through the slits [Diag. 2]. (I used a folded strip of polyethylene the same width as the tape to help in pushing it through the slits without damaging the tape.) I felt that the geometric architecture of this technique was so strong that I decided to keep it as the main design element for the binding. The curves of the flexible album-card tapes on the spine made a wonderful three-dimensional body [Fig. 6]. To finish the binding, I added some white title blocking and drilled little holes with a sewing needle [Fig. 7]. This design reflected the typography inside.

Convinced of the potential of the 'woven structure' technique I started to experiment with different materials. For example, because of its hollow structure, polycarbonate sheet turned out to be a very elegant, light, and efficient cover. The weaving tapes can be passed between the two thin outer sheets and wedged with transparent or coloured plastic beads.



Figs 6 & 7. *The Song of Songs* which is Solomon's.



Fig. 8. *The Best Thing in the World.*

This hollow space can also be used to insert design elements. For the Scripta Manent III Competition in 2005, where the set book, *The Best Thing in the World*, was on children's poetry, I added red and yellow drinking straws [Fig. 8]. For the first Designer Bookbinders International Bookbinding Competition, held in 2009, where the set book was a selection of poems on the theme of water, I challenged myself to integrate fish bones, reinforced with resin, into the supporting structure [Fig. 9].

The set book for the second Bel Libro Competition in 2009 was Rilke's prose poem *Die Weise von Liebe und Tod des Cornets Christoph Rilke*. I felt that I was under pressure because I wanted to use the 'woven structure' as I had in 2003, but needed to find some innovation. Up to this point I had always used hollow or folded book covers. Now



Fig. 9. *Water.*

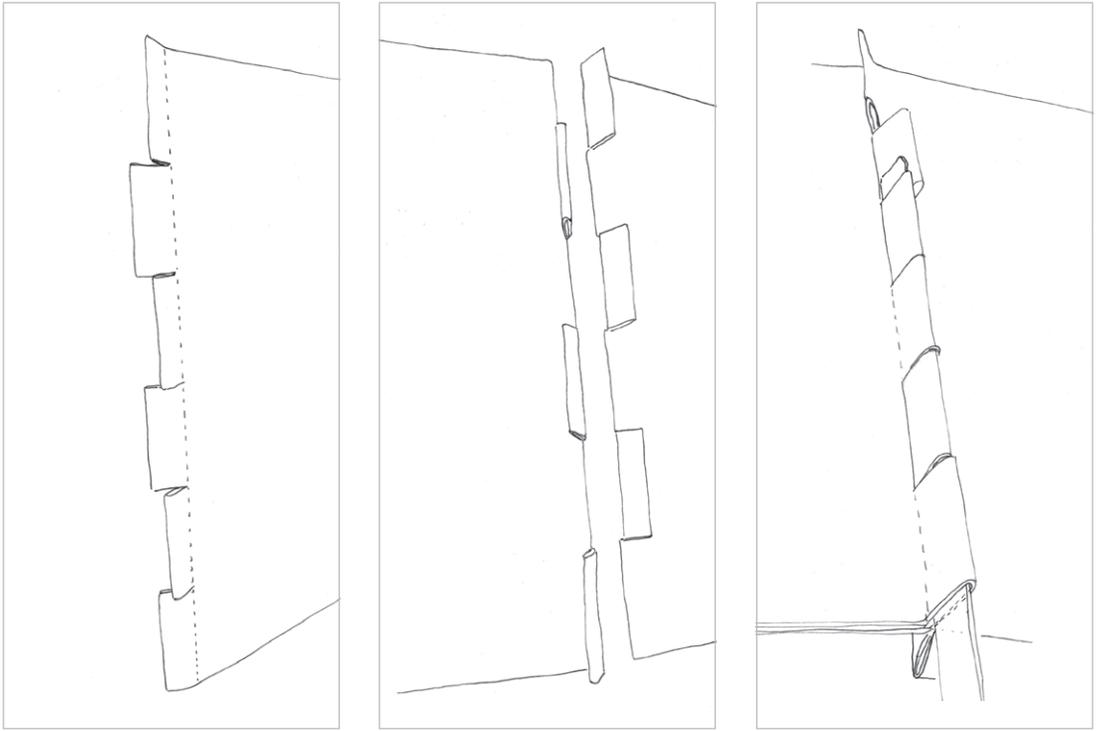
Figs 10 & 11.
*Die Weise von Liebe und Tod
 des Cornets Christoph Rilke.*



I started to experiment with non-adhesive solutions to the problem of attaching the weaving tapes to one-dimensional covers. My first attempt with paper tapes was not very successful. Then, after experimenting with several different types of textile, I arrived at the idea of flattening hemp cord and stiffening it with paste. The book and Plexiglas covers are held together by three hemp bands that are woven through the folds in each section in the way that I have explained above, and then wrapped round the Plexiglas covers and secured with knots

tied through metal disks on the spine. This worked well, and I was delighted that I had found an innovative way of using such traditional materials as hemp cord and paste [Figs 10 & 11].

The set book for the Scripta Manent IV Competition in 2010 was a big challenge in every sense. The book, *The Word was Sung*, by the composer Veljo Tormis, was on Estonian folk music and consisted of the original Estonian version and an English translation. These together took up twenty-four signatures and I did not dare to use a 'woven structure' binding on a book of that size. After many attempts at a solution to the problem, I developed a system of hinges that I named the 'self-supporting structure' as one signature supports the next [Diag. 3]. As this gave a considerable swell to the spine, I decided to make a dos-à-dos binding with the Estonian version on one side and the English on the other [Fig. 12].



Diag. 3. The principle of the 'self-supporting structure'.



Fig. 12. *The Word was Sung*.

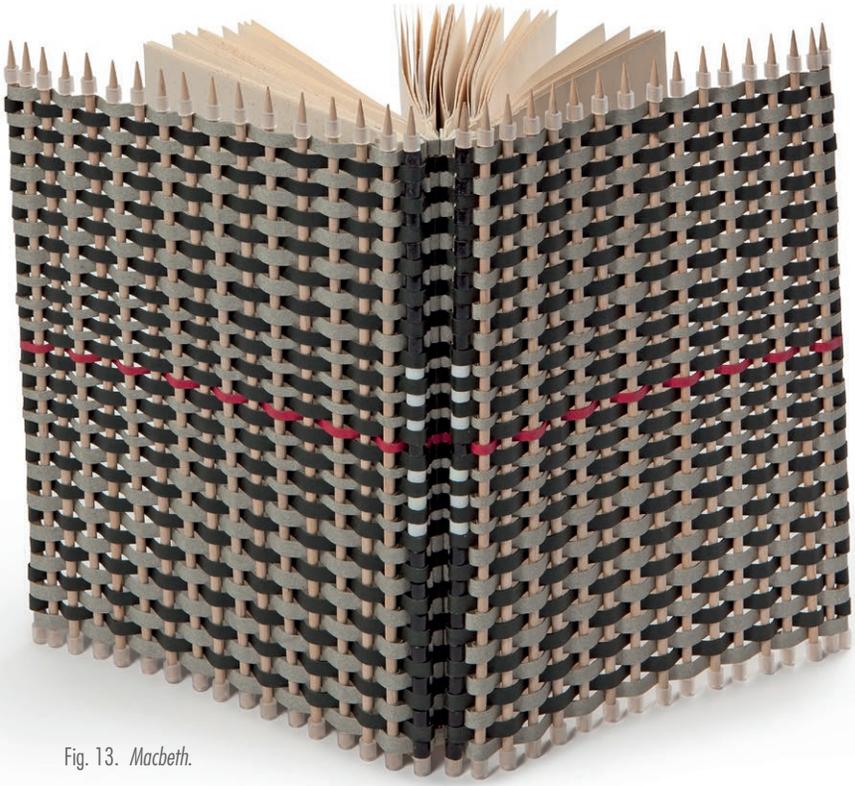


Fig. 13. *Macbeth*.



Fig. 14. *Much Ado About Nothing*.



Fig. 15. *Names, Words, Witches' Symbols*.

For the second Designer Bookbinders International Bookbinding Competition, held in 2013, for which the theme was 'William Shakespeare', I found a tiny volume containing an early French theatre adaptation of *Macbeth*. My idea was to create a kind of mail-coat structure in flexible covers. I fixed the signatures onto paper tabs and worked out a new variation of the 'woven structure' that I call the 'alternate weaving'. The tapes which hold the book-block extend a long way each side of the spine and are used to form flexible covers in a second weaving stage around wooden skewers. Hollow plastic beads fixed at each end of the skewers prevent the tapes from slipping off [Fig. 13].

In the same spirit, I worked on an old facsimile of *Much Ado About Nothing*, but this time I limited myself to transparent materials. In place of the wooden skewers in my binding of *Macbeth*, I used strips of

rigid Plexiglas, and polyurethane for the weaving tapes. The flat strips of Plexiglas were easier to weave round than the wooden skewers. At the head and tail of the book every second strip is bent inwards to secure the weaving tapes [Fig. 14].

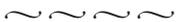
My binding of the set book for the Scripta Manent V Competition, held in 2015, is my latest version of the 'alternate weaving' structure with flexible covers. The book is *Names, Words, Witches' Symbols*, a collection of work by eight young Estonian poets. As for my binding for *Much Ado About Nothing*, I used rigid Plexiglas strips as the support on both sides of the block, but this time I wove strips of Efallin – a fine linen – paper round them [Fig. 15].



Figs 16 & 17.
One-signature sketchbook.

Finally, my most recent study using this structure is a one-signature sketchbook. In this binding the covers are made from polycarbonate, and the front cover flexes on a hinge [Fig. 16]. I made the spine from several thicknesses of folded paper in order to compensate for the thickness of the covers [Fig. 17].

At present I am working on a miniature version of the 'self-supporting structure'. My research into new binding styles is an ongoing process – there is always something new to discover.



Jan Zimmerlich first studied bookbinding in Stuttgart. In 1995 he obtained a grant to study for three months at the Centro del Bel Libro in Ascona with

Edwin Heim, which had a profound influence on his work. He opened his own studio at Neuchâtel in 1997. Since then he has participated in many competitions: he was among the prizewinners in the 'Prix de l'innovation 2003' in Ascona, the Estonian 'Scripta Manent' competitions in 2005 and 2010, and a Distinguished

Prizewinner in the Designer Bookbinders International Competition in 2013. Since 2014 he has been an active member of 'Buch und Form', a creative group of Swiss professional bookbinders.



NOTE

1. Gertrud, A. and Bosch-Gwalter, H. R. (eds) *Das Hohelied von Salomon*. Kranich-Verlag, 1993. The translations into the five different languages are arranged in five blocks on each page.