A fingerloop braiding demo and teaching suite

Combining 14th century techniques with 21st century technology

A part of my teaching materials display is a preliminary version of a suite of fingerloop braiding demonstration and teaching materials in different formats and languages. It is about braiding, learning to braid and learning to pass on the knowledge and skill gained. In this process I try to get the most out of the modern technology so as many as possible get a chance to learn this old skill of making beautiful braids with nothing but some thread and patience.

1 On skills, methods and materials

The idea of a full "fingerlooping suite" has taken several years to mature. All pieces fell into one picture in spring 2012, when I finally had both the skills and the inclination to do a major revamp of my fingerloop braiding materials. My aim is to create something that is beautiful to look at as well as sturdy and versatile as teaching aid.

1.1 Studying and teaching fingerloop braiding

I do medieval reenactment in the Society of Creative Anachronism. While our level of historical correctness varies a lot, the Society does encourage the practice of medieval and Renaissance arts and crafts - and by practice I mean both learning, practicing and teaching these skills. Thus it is not surprising that I started to teach basic fingerloop braiding soon after I'd learned it myself. At that time (in about 2004) I had taught in other fields, but not much in crafts, so in the beginning the process was as much about me learning to teach as me teaching others to braid.

For several years I taught and braided only sporadically. I was lucky enough to secure myself a copy of Speiser's Old English Pattern Books while visiting London a few years back, and in due course that procurement showed up as new additions to my collection of samples. Slowly I also started more systematic study of fingerloop braiding and now I feel that I'm beginning to understand some of the structures involved. This manifests itself in the braids that I've varied for my own purposes, either to reflect e.g. a certain coat of arms or to experiment with more modern fibers and colourings.

For years I also dreamt of a website on narrow wares. First it was just supposed to be about luceting, but then I realized that there isn't that much information online and even less in Finnish. I've been on the Internet and doing web pages since when the World Wide Web was just a toddler, and I've seen how many Finnish knitters and crafters have overcome their fear of computers when the need to share has been so compelling. Thus going online was and is very natural to me, I just didn't get around to creating a website until an uninvited change in my life suddenly gave me the time and the injunction to get started. I didn't think I'd ever have a blog of my own, but when I had figured out that I had to get some kind of a content management system. WordPress turned out to be the answer, so `http://www.lucet.fi/` finally became both a blog and a more static website for sharing knowledge as well as experiments.

1.2 My sample braid collection

I've braided all of my samples myself. The oldest are from 2003 when I learned fingerloop braiding with the newly published *Tak V Bowes*, the newest I've braided in spring 2012. I do most of my practice braids in mercerised cotton as that is gentle on my fingers and doesn't stick on coarse skin like silk tends to do, but still has the bright colours and some of the sheen of silk. As my samples have been to several outdoor fairs where the conditions are sometimes dust and damp, it has also been an advantage that, being cotton, they can be washed in a machine among the normal washing. In the beginning these samples were stored in a small pouch, but once the pile seemed to develop a life of its own, I transferred the samples to punched cards where they stay put, sewn on if needed.
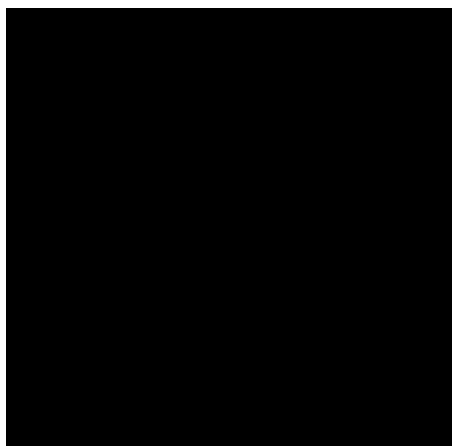

Figure 1 Two of my sample braid cards

My original samples had a small tag with basic info attached to them, but over the years the tags fell off and got lost, and I no longer recall exactly, which braid is from which book. When I had to add cards to the sample collection, I rearranged the braids by technique and difficulty and scribbled the notes directly onto the cards, sometimes with English text on one side Finnish on the other. Thus I can easily pick out the braids I want to show to a certain audience and turn up the correct language, too.

1.3 Computing skills

My aim with the whole project is to write and draw everything just once and then to use different elements to create different types of teaching materials. While I'm fairly experienced with an average office computing and Internet environment, it is only through my job as Documentation Manager that I finally came into contact with a different, more abstract, level of computing that provided software that can do what I'm aiming at.

1.3.1 Typesetting and layout

All of the materials, both the printed output and the interactive pdfs, are typeset in ConTeXt, a macro language based on the TeX typesetting language. The whole system is based on the idea that the contents and the layouts are separated. So instead of doing the layout on screen like in the desktop publishing programs, the layout file contains a *description* of the layout, e.g. margins and font sizes, and the layout is only applied when

a file is compiled. This enables me to compile several totally different looking pdf files based on the same elements or components.

Another reason to choose ConTeXt is that it is very easy to use the same graphics and photos in the different languages. ConTeXt also enables me to keep the Finnish, Swedish and English texts together in a single file as I can use simple switches to pick the language I need - and for proofing, I can compile the whole thing and easily check that the instructions are the same in all languages.

ConTeXt is open-source multi-platform software and free for all except publishing houses that sell typesetting services. It comes with some public domain fonts, but with this project in mind I purchased the Lucida Opentype font set from TUG, the TeX User Group. Not only was it reasonably priced and fully scalable and legible in print as well as on screen, Lucida OT is a full font family that contained everything I needed for the project, even the Gothic style Lucida Blackletter.

Note. This document/project plan is typeset in ConTeXt with the same Lucida OT fonts and is part of my fingerloop braiding suite.

1.3.2 Graphics

I give away most of what I make, so I've learned to photograph everything I made. I take most of the photographs with an old Canon 55 digital pocket camera, but I can see that the quality of my photography has improved over the years, especially since I learned to use the macro function for photographing braids and jewellery. Sometimes I have to resort to snapping a photo with my iPhone, but those are mainly for my own reference and hopefully not needed for this project.

I refuse to draw by hand anything but simple sketches, but I've drawn schematics on computer for over 15 years now. However, until spring 2012 I had only used WYSIWYG programs (What You See Is What You Get) to draw vector graphics. This works well for one-off drawings and there's even free multiplatform software available (Inkscape), but the fingerloop braiding patterns can be automatised a lot better if they do not need to be drawn one-by-one (or rather, with cut-and-paste-and-change). Unlike with knitting or counted thread embroidery, there isn't ready-made software for fingerloop braiding. My solution to this problem is called MetaPost, and it is related to TeX and integrated in ConTeXt. MPgraphics, too, are made by describing the graphic to the software that draws the patterns when the file is compiled.

Currently I still need to do quite a bit by hand, but in the long run I want a system where I only need to enter variables like "6 hands", "left-/right-hand loop", "departed loop, black up, white below", "take La through Lb and pick up Rb reversed", and a graph is generated based on this. Because the fingerloop braiding movements really are paths, they are especially easily converted into vector graphics, e.g. lines and arrows going from point A

to point B. I know Metapost can do all of this, it is only a matter of my own perseverance to understand how to explain things to the software.

2 Project output formats

2.1 Sample braids

Recently I realized that I need several sets of samples: one that's fit to be shown off at demos at medieval fairs in this country, one that can be used at generic craft fairs and classes and one that can be shared online. Furthermore, I wanted to have a 17th century style recipe book for my own reference, one that I can fill up in whatever order I learn new braiding techniques and just need to jot down a few notes on those braids. As I don't know where my teaching will take me and in what format, I decided to make some posters that can be hung on a wall or pinned to a screen either independently or in connection with a class or demo I'm doing myself.

The samples for a 15th century style book of braids are mostly done in silk, although there'll be a few linen ones based on existing finds. The set also includes a few finished products using the technique: bookmarks and Renaissance gown fastenings (ties and button-and-loop frogs) in a simple purse with silk purse strings.
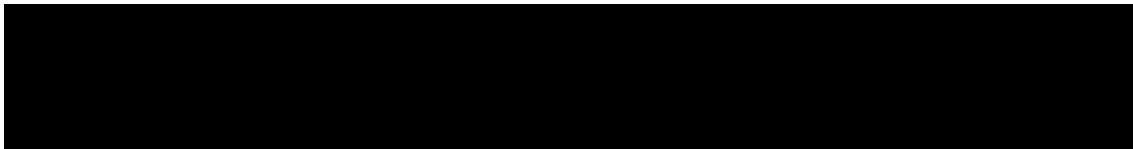

Figure 1   "Hearts", my two-colour variation of Grene Dorge. Pearl cotton nr 8.

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2.2 Printed material

2.2.1 Helsinge book of strings, a 15th century sample book

The area I live in is known in the medieval documents as the parish of Helsinge and as many of the manuscripts of the era are known by either owner or collector or the place they are stored in, I thought this would be an appropriate name for my book of strings.

The layout follows loosely that of the Harley manuscript 2320, with an upright blackletter font (Lucida Blackletter) and well-filled pages. The space next to each section and subsection title will accomodate a silk sample braid sewn on.

One day I may calligraph a book for my own use, but for medieval fairs I want to have something that I can easily recreate (i.e. reprint) if the old one gets wet or just to dirty to be handled. Cloth paper is too expensive for this purpose, but at least some versions of the book will be printed on off-white paper. I once learned a very simple medieval bookbinding stitch that I'm going to use to bind these books.
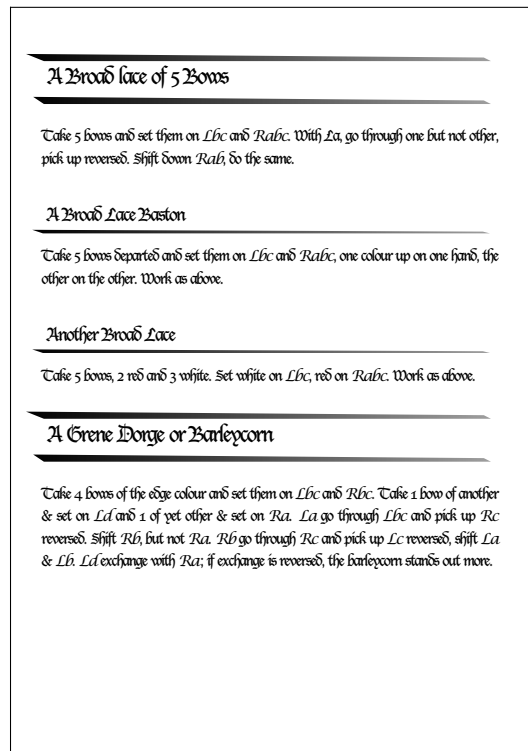
Figure 2 A page of Helsinge book (scaled down, without braid samples)

2.2.2 A 17th century braiding recipe book

This is the book I'm compiling for myself, to use as reference when working at medieval fairs and other places where one might frown at using a modern book. The texts are the same as for *Helsinge book*, but it is typeset with Lucida Calligraphy, a slightly later handwriting font; not quite like the cursive the enigmatic Lady Bindloss used, but in the same vein. No samples, no figures, just notes on how to set up a certain braid.
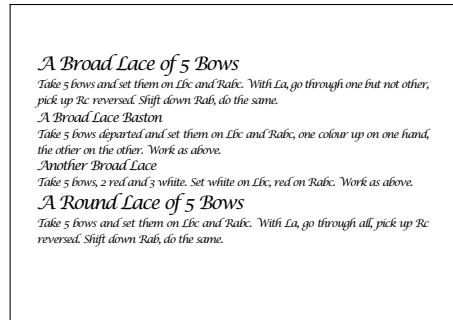

A Broad Lace of 5 Bows
Take 5 bows and set them on Lbc and Rabc. With La, go through one but not other, pick up Rc reversed. Shift down Rab, do the same.
A Broad Lace Baston
Take 5 bows departed and set them on Lbc and Rabc, one colour up on one hand, the other on the other. Work as above.
Another Broad Lace
Take 5 bows, 2 red and 3 white. Set white on Lbc, red on Rabc. Work as above.
A Round Lace of 5 Bows
Take 5 bows and set them on Lbc and Rabc. With La, go through all, pick up Rc reversed. Shift down Rab, do the same.

Figure 3 A draft page of my period notebook

2.2.3 Scrapbook and posters

I've decided to make my modern sample book and most of the posters in the standard scrapbook size, 12 x 12 inches. They'll be partly interchangeable as most scrapbook albums have clear plastic pockets into which the page is inserted. As the pockets are also designed to accommodate several layers of paper or cardboard, a single-sided poster with samples will fit nicely into an album.

The texts are printed into frames, but after that I put everything together by hand, so they have a slightly old-fashioned feel, but are still legible. If I want to change the texts, I only need to replace the damaged texts, samples and backgrounds, but do not have to start over from beginning.
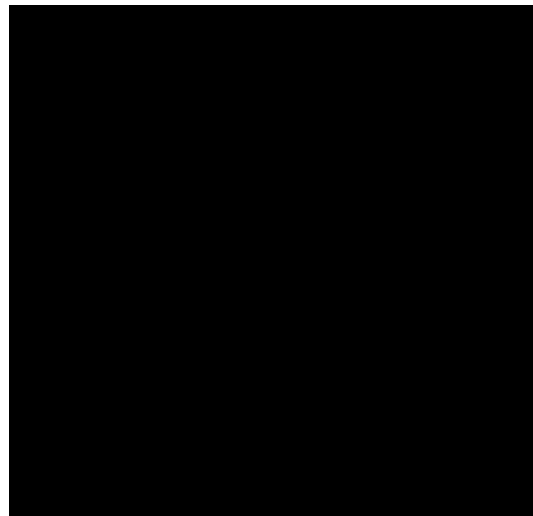

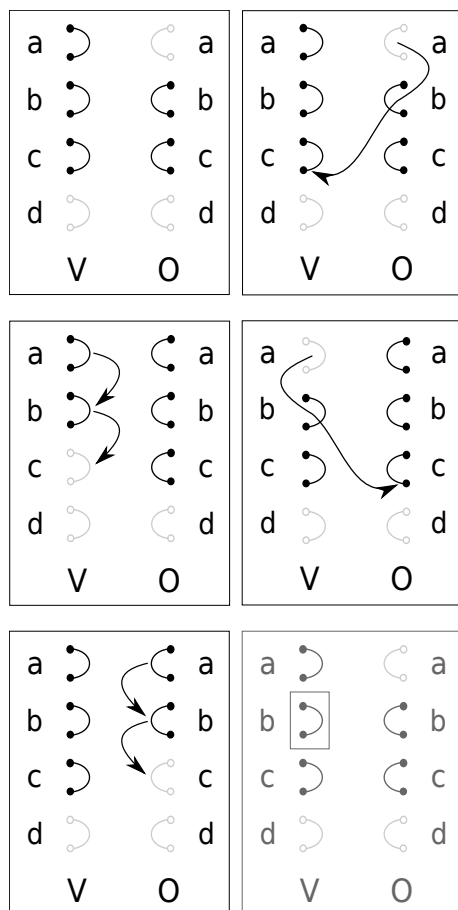**Figure 4** One of my sprang posters (in Finnish)

2.2.4 Instruction sheets

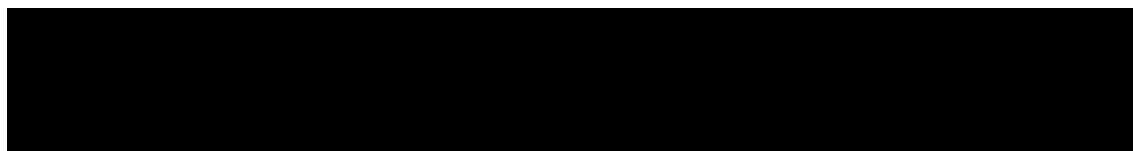**Figure 5** A first attempt to describe the 5-loop unorthodox braid

The instruction sheets will contain full - both written and graphic - "modern" instructions on how to make a certain braid as well as a colour photo of the finished braid. All the graphics are generated by MetaPost, following a style that Elizabeth Benns and Gina Barrett used in "Tak V Bowes", as that is the way I personally find clearest. In text I'm sticking to the 15th century style that Noémi Speiser also uses; it is not the way I originally thought of finger-loop braiding, but I have grown to understand and like it and there's no reason to deviate from what is more or less the standard in the field.

In my other material English comes first, but the instruction sheets will be done in Finnish first as there's a demand for such a material among others at schools. This is where I'll be deciding on what kind of terminology to follow in Finnish, so it is important for me to start with the most extensive instructions and then do the shorter versions later, based on my English sample books.

Figure 6 "Hearts", my two-colour variation of Grene Dorge. Pearl cotton nr 8.

2.3 Electronic material

I have not yet decided whether I will publish all of my material online or just the basics and my own patterns. In any case my typesetting system makes it very easy to create pdf's with clickable document internal links, e.g. table of contents and a pictorial index of patterns. These e-versions will also be optimized for on-screen reading at least for a laptop screen and possibly even for a smartphone, as it is a very handy way of keeping how-to instructions in one's pocket for quick reference. All the information that I decide to share will also be downloadable in ready-to-print size on my website. As printable pdf is the native format of my teaching suite files, the only extra work involved is to upload and link.

I also have a YouTube channel with a few instruction videos on luceting and tabletweaving, and the next additions to that channel will be on fingerloop braiding. These videos I make in iMovie on my Mac, but I'll have to look into creating the inserts out of the existing material for the sake of consistency and ease of switching between languages. Once I've uploaded the videos, they'll be linked (but not embedded) to the fingerloop braiding suite as "additional material" as my video recording and editing skills aren't quite up to par yet; but even a slightly grubby video is better than nothing, sometimes it is just the little something that static graphics are missing.