

Beatrix Nutz

**DRGENS SN WIR VS NVT SCHAME – NO SHAME
IN BRAIDING
15TH CENTURY FINGERLOOP BRAIDS FROM
LENGBERG CASTLE**

Based on the 15th century textile finds of braided laces from Lengberg Castle, east Tyrol, this paper explores the technique of fingerloop braiding and gives instructions on how these laces were made. Fingerloop braiding is an old technique of unknown origin found almost worldwide where threads are used paired as loops. The laces achieved by this technique were often used as purse strings ending in fringes and knots or adorned with metal chapes at each end in order to use them for fastening clothes. As organic matter decays, these lace chapes are often the only parts that survived the centuries and are found frequently during archaeological excavations. Yet fingerloop braids were not only used for fastening but also sewn onto other fabrics as decorative elements. In these cases no metal chapes remain to bear testimony to their former existence. Several textiles decorated in this manner have been found at Lengberg and a closer look at other surviving medieval textiles also reveal these laces.

Beatrix Nutz, Department of Medieval and Historical Archaeology, Centre of Ancient Cultures, Institute for Archaeologies, University of Innsbruck, Langer Weg 11, 6020 Innsbruck, Austria; beatrix.nutz@uibk.ac.at

Introduction

At Lengberg Castle archaeological investigations of several parts of the building were carried out under the supervision of Harald Stadler (Institute for Archaeologies, University of Innsbruck) in 2008. During the research a filled vault was detected below the floorboards of the 2nd storey. The fill consisted of dry material in different layers, among it organic material, such as worked wood, leather and textiles. Investigations on construction techniques and the archaeological feature suggested a dating of the finds to the 15th century. This date has now been suggested by five radiocarbon dates carried out at the ETH-Zürich.

Lengberg is first mentioned in a document from August 15, 1190 in which a donation of Count Heinrich of Lechsgemünd to the monastery of Viktring in Carinthia was confirmed and Volcarth, Caloth and Otto de Legenberch, ministeriales (e.g. unfree nobleman in the Holy Roman Empire) to the House of Lechsgemünd, were named as witnesses. Heinrich of Lechsgemünd sold the castle to Archbishop Eberhard of Salzburg in 1207 and until 1803 the castle was property of the archbishops of Salzburg, who assigned its administration to various peers (Hörmann 2003).

Concerning the textile finds from Lengberg, two administration periods deserve closer attention. In 1419 Andre and Peter Mosheimer received the castle for their lifetime care, which then belonged to the family until 1453. Virgil of Graben (†1507), one of the most powerful nobles of his time in the region of Upper Carinthia and East Tyrol, was assigned lifelong Lord of Lengberg in 1480. Virgil of Graben had the old castle ‘Veste Lengenberch’ modernised by adding an additional floor. It was during this modification that the vault between the roof of the 1st floor and the floorboards of the new 2nd storey was filled with waste. This remodelling is mentioned by Paolo Santonino in his itinerary. He also gives us a short description of the castle and mentions the consecration of the castle chapel by Pietro Carlo, Bishop of Caorle (1472–1513), on October 13th, 1485 (Santonino 1947, 35). Taking into consideration that the reconstruction was probably finished by the time the chapel was consecrated most of the finds (except for small pieces that have fallen through gaps in the wooden floor at a later date) must predate October 1485. It is unlikely that the consecration took place while the construction was still under way, especially as in the 15th century the chapel and the vault with the finds were situated in the same wing of the castle, the chapel on the 1st floor and the room with the filled vault underneath on the 2nd floor. In addition, Paolo Santonino, while mentioning the ‘rebuilding’ conducted by Vigil of Graben, wrote nothing about on-going reconstruction work.

More than 2722 individual textile fragments, not counting loose threads, some originally probably belonging to the same piece of clothing, range from almost completely preserved garments and fragments of linen lining with remnants of the former colourful woollen outer layer to textile buttons and small cloth fragments whose original use is no longer determinable due to their degree of fragmentation. Evidence of tailoring is provided by an iron needle with linen thread still wrapped around the sewing tool, which was found among the filling material.

The majority of textile finds consists of larger and smaller fragments, mostly linen, many with seams and hems. Wool textiles are generally in a worse condition and more fragmented due to moth damage. Several fragments provide evidence for a secondary use. They were torn into strips and used as binding material, as some pieces with knots appear to suggest.

Along with fourteen loose braids – five of which still preserve their looped ends – five woven textiles are decorated with loop braided laces, thus adding up to a total of nineteen laces. Three of the garments decorated with laces belong to

female underwear and one to a very small (possibly a baby's) piece of clothing. Thirteen lace chapes (also known as aglets or aiglets), one with tiny remnants of lace still inside the tube, together with fragments of garments with eyelets indicate their use as fastening strings.

Fingerloop braiding or loop manipulation braiding technique

Fingerloop braiding is a hand-braiding technique requiring no assistance of tools except for an optional beater. The working ends of the threads are paired and form loops rather than being separate as in braiding with open ends (plaiting). One end of the bunched braiding threads is fixed on a support, and each loop is mounted on a finger of the hands (finger-held method). Alternatively one may slip the sequentially arranged loops around the hands (hand-held method). To make a braid, you exchange the loops, one at a time, between two hands following a prescription (Kinoshita 1998). In Europe, holding the loops with your fingers is the only method proven, whereby depending on the number of loops, a person is working alone or together with one or more partners. The method allows fast work and is especially suitable for thin, fine material and preferable to the more time-consuming method of plaiting with open ends. In the European Middle Ages and the Renaissance loop braiding was the most important production method for braided laces and bands and has been exercised by both professional craftsmen as well as in monasteries and private homes (Boutrup 2010; 2011).

Written and pictorial sources

Manuscripts from the 15th and 17th centuries (e.g. British Library MS Harley 2320; Griffiths & Edwards 2001; see list of manuscripts in Speiser 2000) provide instructions on how to make various laces and contemporary images show men and women at work. The oldest depiction known so far can be found in the 'Haus zur Kunkel' (translation: House of the Distaff) in Constance in south Germany containing several frescoes dated to before 1306 (Wunderlich 1996). The 'weaver fresco' shows 21 scenes of women engaged in textile production, each scene with a sentence in medieval German above relating to the work in progress. In one scene two workers, a girl dressed in red and a young woman dressed in green, are occupied with loop braiding. The girl is holding the braid at one end in her right hand and is beating the fell with the left. The young woman has the loops mounted on her fingers and is moving a loop from one hand to the other (Fig. 1). The sentence above the scene reads 'Drgens sn wir vs nvt schame' (translation: We are not ashamed to braid). The abbreviated word that should read 'Dringens' means braiding in medieval German.

The sentence from Constance implies that braiding, in relation to other textile work such as weaving, might have been considered a menial task. Here the girls



Fig. 1. ‘Drgens sn wir vs nvt schame’. Two women braiding, fresco in the ‘Haus zur Kunkel’ Constance, Germany, before 1306 (Rosgartenmuseum Konstanz).

either state that they are willing to do it nonetheless or that they do not at all share this opinion. And indeed, this technique needs quite some dexterity and skill and should therefore not be disparaged. Why should you be ashamed to braid? Because you do not need any implements for your work?

That the word ‘dringen’ refers to braiding, specifically loop braiding, is confirmed by the find of a ‘recipe’ for a braid in a 15th century German manuscript that seems to have originated in the Klarissenkloster (the Convent of the Poor Clares) in Nuremberg and is today housed in the Library of Heidelberg University. The instructions for the ‘Lintwurm portlein’ (translation: The dragon braid) start with:

Item wildu dringen ein portlein hast ein
lintwurm so müssen eur 3 dar zu sein
vun jeliche 5 schlingen haben ein varb...¹ (Bargmann 2001, revised 2002, 2006).

¹ Free translation: If you want to braid a lace (or braid) that looks like a dragon you need three workers and each worker needs five loops of one colour.

Another image depicting loop braiding is found on the altar piece ‘Ystoria della Virgen Maria’ (translation: Story of the Virgin Mary), attributed to Nicolás Zaortiga, 1465 in the Iglesia de Santa Maria de Tarazona, Borja, Zaragoza province, Spain. The altar piece portrays the Virgin Mary, holding the Christ Child, surrounded by female saints engaged in various textile arts², including a saint braiding with eight loops together with a second worker. The second saint beats the fell holding a slender rod in her right hand while winding the braided length onto a stick in her left hand (Fig. 2).

An etching by Jan Georg van Vliet from around 1635 shows two men fingerloop braiding along the brim of a hat. One man is braiding while, at the same time, the other is sewing the braided length onto the brim (Zimmerman 2007, 160; 2012, 93).

Manuscripts offer step by step instructions sometimes going as far as to name the fingers after letters in the alphabet. The Harley manuscript from the 15th century and a printed manual from the middle of the 17th century start in an almost identical manner:

In þ^e maner of laces makyng þ^u schalt vnderstond þat the furst fynger next þ^e thombe schal be called o A, on þ^e s(e)c(un)de fynger B, þ^e iij^e C, iiij^e D. Also sum tyme þ^u schalt take thy bowys reuercyd and sum tyme vnreuercyd³ (British Library MS Harley 2320. Transcription in: Stanley 1974, 95).



Fig. 2. Image depicting loop braiding on the altar piece ‘Ystoria della Virgen Maria’ (Story of the Virgin Mary), attributed to Nicolás Zaortiga, 1465 in the Iglesia de Santa Maria de Tarazona, Borja, Zaragoza province, Spain (Institut Amattler d’Art Hispanic, Barcelona, Spain).

² E.g. winding yarn from a spindle to a niddy noddy (yarn winder), sewing or embroidering, knitting.

³ Translation: In the manner of lace making you must understand that the first finger next to the thumb will be called A, the second finger B, the 3rd C, 4th D. Also some time you will take your bows (loops) reversed and sometimes unreversed. For visualization see Fig. 5.

In the manner of making Laces, you shall understand at the beginning that the second finger shall be called A, the third B, the fourth C. and the fifth D. and mark wel when thou takest a bow through another, sometime you shall take through the bow aright, and sometime the reverse (Anonymous 1655, 420).

Directions for the most common, standard laces can be found throughout the centuries in several manuscripts and printed books. One of these laces, worked with five loops, is also a lace variety found in Lengberg (e.g. a broad lace of five loops). The broad lace of five loops is one of the more widely known braids and was often used for purse strings (Benns & Barrett 2005, 39).

For to make a brode lace of v bowes: Set ij bowes on B and C rygth, and iij bowys on A, B, C Iyfte. þen schal A rygth take þorow p^e bowe B of p^e same hand p^e bowe C of p^e Iyft hand reuersyd. þen lowe þy Iyft bowes. þen schal A Iyfte take þorowout B of p^e same hand þe bowe C of p^e rygth hand reuerced. þen lowe þy rygth bowes, and begynne agen⁴ (British Library MS Harley 2320. Transcription in: Stanley 1974, 95).

A broad Lace of V. bows

If you will make a broad lace of V bows, take two bows upon B. C. of thy right hand, and three bows upon A. B. C. of thy left hand, and then take A. of the right hand through the bow B. upon the self hand⁵, and the bow C. reversed of the left hand, and then low thy bows of thy left hand, and then shall A. of thy left hand take through the bow B. of the self hand, the bow C. reversed of thy right hand, and then low the bows of thy right hand and begin again (Anonymous 1655, 421).

The fingerloop braids from Lengberg

A total of nineteen laces, eighteen laces from the 15th century (Table 1) and one of yet undetermined age, were found at Lengberg Castle but not all of them are necessarily fingerloop braided. A piece of string of three strands, each strand consisting of four Z-spun yarns (Inv. No. 721.04.02) was almost certainly plaited with open ends. Four laces could have been worked either way. Loop braiding usually results in an even number of strands as each loop will produce two thread ends. Therefore, even if the loops are no longer preserved, having been cut or ripped off, counting the strands provides a clue to possible loop braiding, but not always. Certainty can only be gained if loops remain at one or both ends of the lace.

Any lace, regardless of even or uneven number of threads, can be done with open ends and some laces with an uneven number can be done with loops as well as with open ends. A lace sewn onto a garment (Inv. No. 624.01), a loose lace fragment (Inv. No. T0109L) and a lace fragment with needle lace (Inv. No. 513.05),

⁴ Translation: To make a broad lace of five bows (loops): Put two loops on B and C right and three loops on A, B and C left. Then A right goes through the loop B of the same hand and takes the loop C of the left hand reversed. Then lower your left loops. Then A left goes through B of the same hand and takes the loop C of the right hand reversed. Lower the right loops and begin again.

⁵ Self hand = same hand.

Table 1. 15th century laces from Lengberg

	Inv. No.	Length	Colour	Fibre	Object
1	01.02 (Fig. 4: 9)	48 cm	Off white	Flax	Thin lace of five loops. Sewn onto a linen garment with needle lace in between. S-plied two-ply yarn.
2	01.07 (Fig. 4: 10)	37 cm	Off white	Flax	Broad lace of five loops. Sewn onto a linen garment with needle lace in between. S-plied two-ply yarn.
3	333.08	13.5 cm	Off white	Flax	Broad lace of five loops. Loops on one end preserved. S-plied two-ply yarn.
4	430.11 (Fig. 4: 2)	16 cm	Off white	Flax	Round lace with two loops. S-plied two-ply yarn. Loops on one end preserved.
5	513.01 (Fig. 4: 11)	17 cm	Off white	Flax	Broad lace of five loops. Sewn onto a linen garment with needle lace in between. S-plied two-ply yarn.
6	513.05 (Fig. 4: 6)	8 cm	Off white	Flax	Thin lace of three loops or six strand flat braid and needle lace. Probably former border of a garment. S-plied two-ply yarn.
7	624.01	6 cm	Off white	Flax	Thin lace of three loops or six strand flat braid. Sewn onto the hem of a linen garment. S-plied two-ply yarn.
8	721.04.01 (Fig. 4: 3)	5.5 cm	Faded blue	Silk (<i>Bombyx mori</i>)	Broad lace of five loops. S-plied two-ply yarn.
9	721.04.02	26 cm	Off white	Flax	Three strand plaited braid. Each strand consisting of four Z-spun yarns.
10	721.04.03	5 cm	Off white	Flax	Broad lace of five loops. S-plied two-ply yarn.
11	724.02.01 (Fig. 4: 7)	10.5 cm	Red	Wool	Four strand round braid or lace of two loops. S-plied two-ply yarn.
12	724.02.02 (Fig. 4: 4)	5.5 cm	Blue	Wool	Broad lace of five loops. Cut off on one end. S-plied two-ply yarn. The other end tied with white S-plied two-ply yarn.
13	802.07	25 cm	Off white	Flax	Broad lace of five loops. S-plied two-ply yarn.
14	803.01 (Fig. 4: 8)	13.5 cm	Brown	Cotton?	Broad lace of five loops serves as decorative seam between two woven textile fragments. S-plied two-ply yarn.
15	803.03 (Fig. 4: 1)	21.5 cm	Off white/ brown	Flax	Bicoloured lace with nine loops worked in two patterns. A broad lace and a thin lace of five loops. Loops on both ends preserved. Practice piece? S-plied two-ply yarn.
16	803.04 (Fig. 4: 5)	15.5 cm	Off white	Flax	Thin lace of five loops. Cut off on one end. Loops on the other end preserved. S-plied two-ply yarn.
17	T0109L	12 cm	Off white	Flax	Thin lace of three loops or six strand flat braid. S-plied two-ply yarn.
18	T0266L	8.4 cm	Off white	Flax	Broad lace of five loops. Loops on one end preserved. S-plied two-ply yarn.

each with six threads of S-ply two-ply yarn, could have been braided with three loops or be a six strand flat braid plaited with open ends (Fig. 3: 2). Using three loops the work has to be carried out as follows:

Left hand – Put one loop onto A and one loop onto B.

Right hand – Put one loop onto B.

1. A right goes through B right to take B left REVERSED.
2. Lower A left to B left.
3. A left goes through B left to take B right UNREVERSED.
4. Lower A right to B right.

Begin again.

Of the two round braids with four threads (Fig. 4: 2, 7) one was probably plaited with open ends (Fig. 4: 7) as a four strand round braid (Fig. 3: 1), but Fig. 4: 2 still retains its two loops on one end clearly stating to be fingerloop braided. Unfortunately so far all endeavours to replicate the pattern of the later have not been able to procure an identical appearance.

A possibility to end up with an uneven number of threads even though using loops is working two laces at the same time (or an open lace at it is called in the manuals). For example:

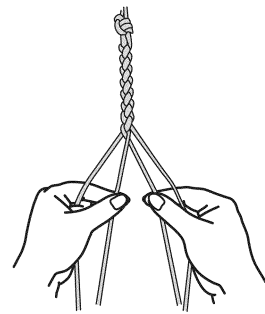
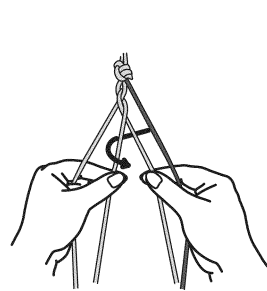
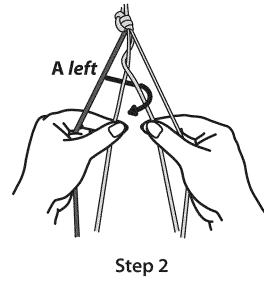
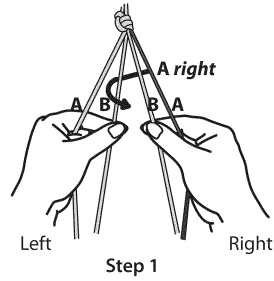
For to make an open lace of v bowys: Set v bowez on þy fyngrys as yn þ^e round lace of v bowys and wyrke yn þ^e same manere, saf þere þ^u takest þ^e bowys of bob^e pyn hond reuercyd, yn thys lace þ^u schalt take þ^e bowes of bothe þyn hondys vnreuerced⁶ (British Library MS Harley 2320. Transcription in: Stanley 1974, 96).

Using five loops would normally result in ten threads (an even number), but here you get two separate laces with five threads each. This technique was used to make drawstrings for medieval purses. Several preserved relic purses have a handle that divides into two at both ends thus continuing into the drawstrings (Boutrup 2010, fig. 9). If only a fragment of one of the drawstrings was found one would only see a flat lace with five strands or threads that could also have been worked with open ends.

The five laces from Lengberg that were certainly made by loop braiding as they still retain their looped ends, were done using five loops (Inv. No. 333.08, T0266L and Fig. 4: 1, 5) and two loops (Fig. 4: 2). The bi-coloured lace (Fig. 4: 1) seems to have been a practice or exemplar piece. As the loops on both ends are preserved it is not a fragment but with a length of only 21.5 cm it is most likely too short to have been used. In addition it shows two different patterns, the first pattern repeating itself after the second one. In order to achieve a moderately broad lace with rather thin two-ply yarn (thread diameter: brown S-ply yarn = 0.5 mm; off white S-ply yarn = 0.7 mm) nine loops were used forming four pairs (two brown, two off white) each pair treated as if it was only one loop and one single white loop. This lace gives the impression that either the worker wanted to know

⁶ How to make an open lace of five loops: Put five loops on your fingers as in the round lace of five loops and work in the same way, but there you take the loops of both your hands reversed, in this lace you shall take the loops of both hands unreversed.

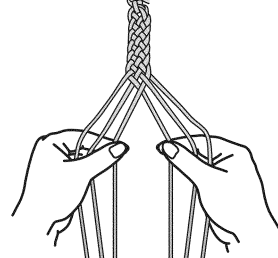
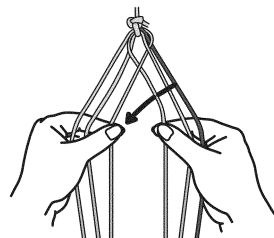
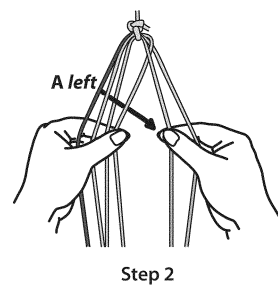
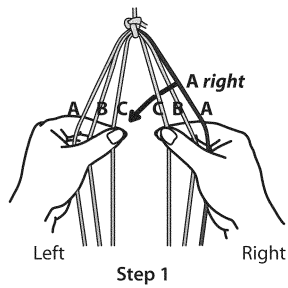
4-strand round braid



Step 1 and 2 completed—begin again

braid after several completed passes

6-strand flat braid



Step 1 and 2 completed—begin again

braid after several completed passes

Fig. 3. Braids plaited with open ends. Drawing by Beatrix Nutz.

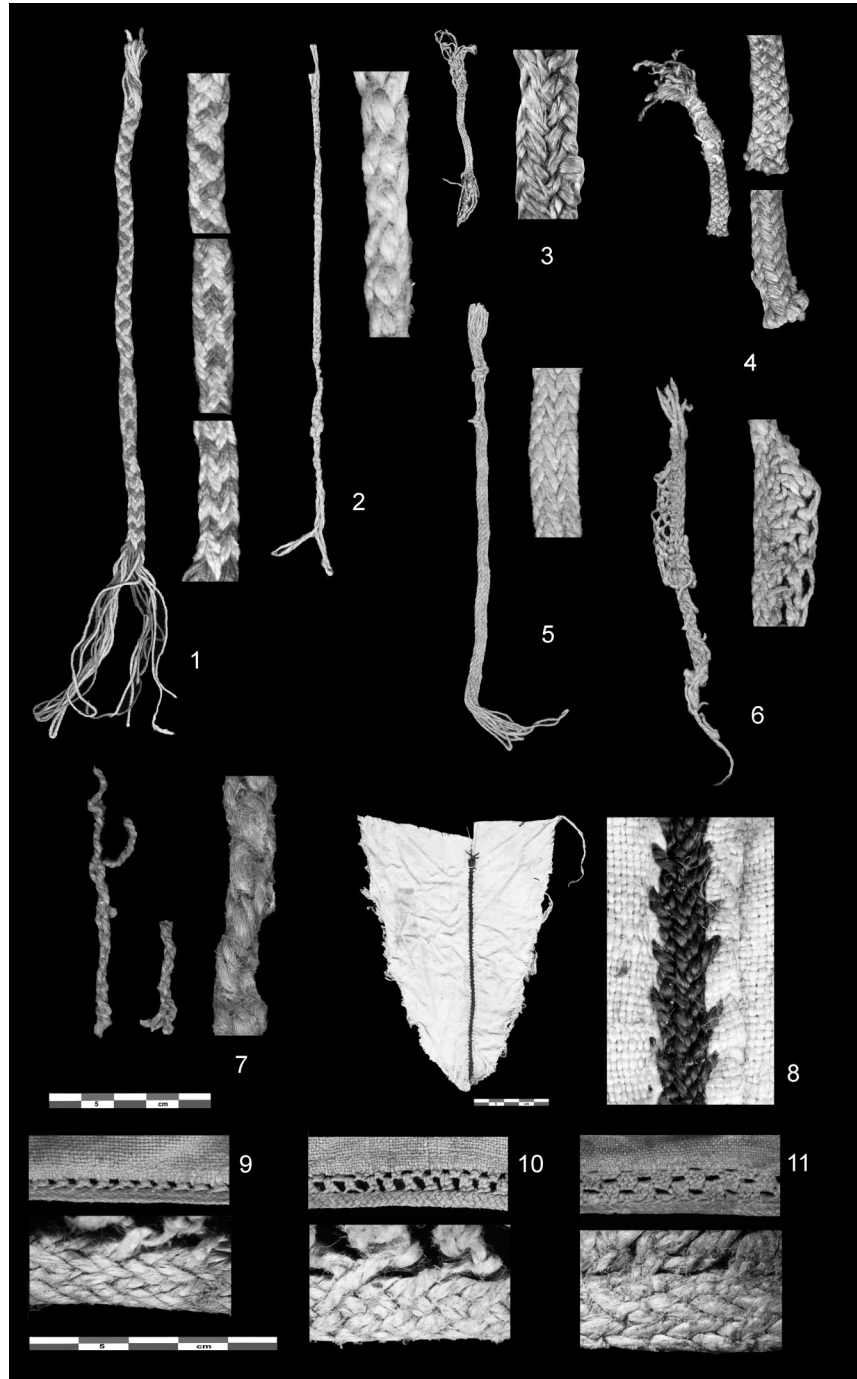


Fig. 4. Fingerloop braided laces from Lengberg Castle, east Tyrol. Photo by Beatrix Nutz (Inv. Nos: 803.03; 430.11; 721.04.01; 724.02.02; 803.04; 513.05; 724.02.01; 803.01; 01.02; 01.07; 513.01).

how many different patterns could be done using this combination of loops or wanted to create a swatch for further reverence. Quite a few braiding manuals from the 17th century have swatches stitched or glued onto the pages accompanying the recipes (Speiser 2000, 15). The two patterns were worked as follows:

Pattern 1 of 803.03 (Fig. 4: 1) – A broad lace of 5 loops (for visualisation of the fingers and finger movements see Fig. 5)

Workers: 1 Loops: 5 (9) Colours: 2

Left hand – Put two loops brown onto A, two loops white on B and one loop white on C.

Right hand – Put two loops brown on B and two loops white on C.

1. A right goes through B right to take loop C left REVERSED.
2. Lower the left loops (B to C and A to B).
3. A left goes through B left to take loop C right REVERSED.
4. Lower the right loops (B to C and A to B).

Begin again.

Pattern 2 of 803.03 (Fig. 4: 1) – A thin lace of 5 loops

Workers: 1 Loops: 5 (9) Colours: 2

Left hand – Put two loops white onto A, one loop white onto B and two loops white onto C.

Right hand – Put two loops brown onto B and two loops brown onto C.

1. A right goes through B and C right to take loop C left REVERSED.
2. Lower the left loops (B to C and A to B).
3. A left goes through B and C left to take loop C right UNREVERSED.
4. Lower the right loops (B to C and A to B).

Begin again.

Twelve of the braids from Lengberg are worked in one (or both) of the patterns above making these two patterns the most common ones, the broad lace of five being dominant with nine specimen.

The braid with the five loops on one end still preserved (Fig. 4: 5) has been cut (probably with scissors) on the other end. This is made evident by all thread ends being almost the exact same length. Therefore, this lace was once much longer, the missing length used for fastening or sewn onto another fabric as decoration and the fragment with the loops representing the surplus.

Five laces served as decorative edges, either sewn directly onto the hem of the garment (Inv. No. 624.01 – probably part of baby clothes, compare Huggett & Mikhaila 2013, 14) or with needle lace in between. Together with the needle lace the braids adorned three of the ‘bras’ from Lengberg (Nutz 2013) at the same time serving as reinforcement of the lower hem (Fig. 4: 9–11). One lace was inserted between two linen fabrics. Both fabrics are of the same quality – fine linen in tabby weave with 29–30 threads/cm in warp and weft (Fig. 4: 8). One edge of the brown, broad lace of five loops was sewn onto a selvage the other edge onto a double folded hem (sewn with whip stitch) using overcast stitches. The regularity of the stitches suggests that this was done simultaneously to the braiding much like shown in the etching by Jan Georg van Vliet from around

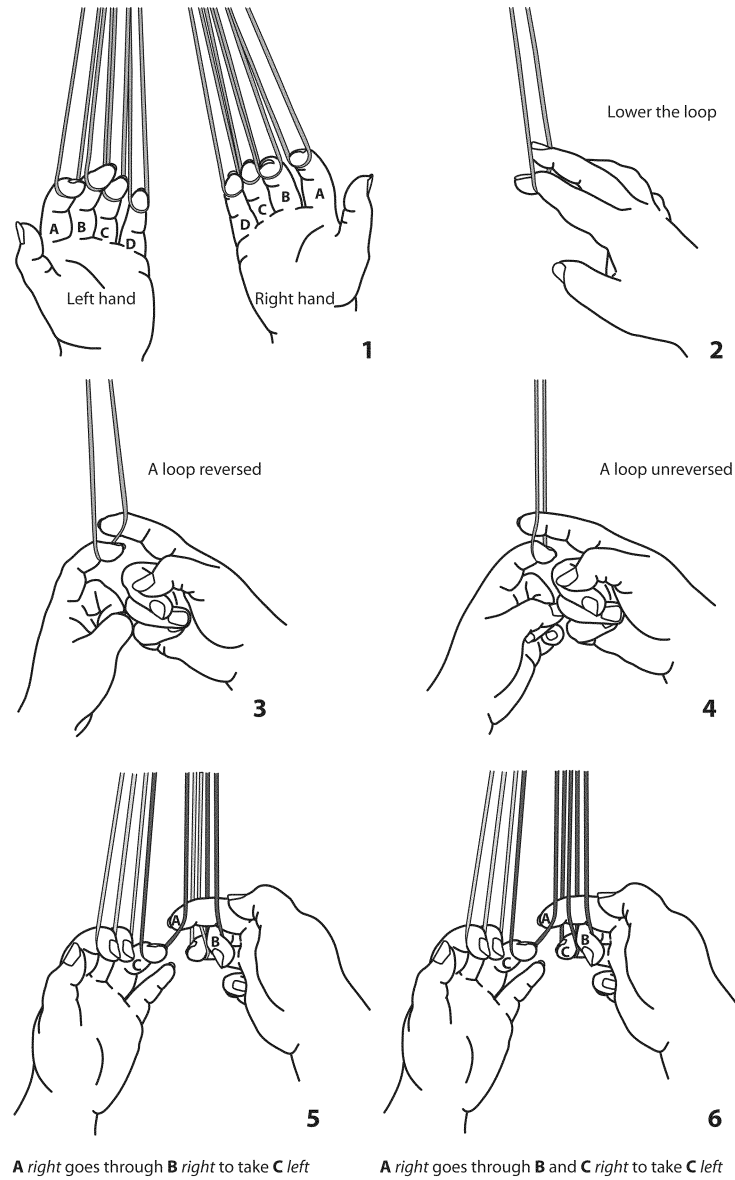


Fig. 5. Diagram of fingers and finger movements. Drawing by Beatrix Nutz.

1635 meaning that at least two people were working on one piece of cloth at the same time. The original purpose of the fabric is unknown. Braids attached between pieces of fabric can also be found elsewhere, for example among the surviving textile material from Vadstena Convent, Sweden. The convent textiles still extant today are liturgical and were made sometime between 1400 and 1520 (Speiser et al. 2011).

Most laces are made of undyed linen thread with one made of silk, two of wool and one probably of cotton. The colours of the two woollen laces are well preserved and still maintain their bright red and blue appearance, whereas the faded blue of the silk lace can only be detected under a microscope.⁷

The lace chapes from Lengberg

Thirteen lace chapes, eleven of non-ferrous metal (one with remnants of lace still inside the tube) and two iron ones still attached to the end of leather thongs tied together with a knot (Fig. 6: 5) show that some of the laces were used for fastening. Chapes protect the ends of laces and enable them to be threaded easily through corresponding eyelets in garments. Three types (after Krabath 2001, 228) can be found, all bent into tubes with a straight seam along the side:

Type 1: cylindrical or slightly cone-shaped (e.g. Fig. 6: 3, 5);

Type 2: cylindrical or slightly cone-shaped and riveted at the wider end (e.g. Fig. 6: 1 – remnants of lace still inside the tube and preserved rivet and Fig. 6: 2 – with rivet hole);

Type 3: pointed narrow end, cylindrical with wide open end (e.g. Fig. 6: 4).



Fig. 6. Lace chapes from Lengberg Castle. Photo by Beatrix Nutz (Inv. Nos: 555.01.01; 812.01.03; 645.02; 555.01.02; 585).

⁷ No dye analyses were done on the laces, but results from other textile samples from Lengberg show that blue hues were achieved with woad (Indigoid dye source). Sources for red were plants of the *Rubiaceae* family (madder – sometimes together with redwood) and Kermes for silk. HPLC-DAD analysis by Ina Vanden Berghe (Institute for Cultural Heritage, Brussels).

While the laces, especially the ones sewn onto garments, were most likely made by the inhabitants of the castle – the ‘practice piece’ being one clue – there is no evidence pointing to the lace chapes being made on site. They were either made by a local lace chape maker and bought directly from him or bought at a market from a merchant or in a haberdasher’s shop.

Lace chape makers (in German: Nestler, Nestelmacher) belong to the metal-working industry. Like all lace chape makers whose images can be found in the ‘Hausbücher der Nürnberger Zwölfbrüderstiftung’, Dyetz Nestler († before 1423) is depicted in Amb. 317.2° Folio 40 recto (Mendel I, Treue et al. 1965, 119, Taf. 73) holding a hammer needed to shape the aiglets (Fig. 7). The laces were most likely braided by other craftsmen or craftswomen as this activity is never represented in these images. At first sight the inventory of wares from a haberdasher’s shop in London⁸ seems to suggest that laces and chapes were made by different professions



Fig. 7. Lace chape maker Dyetz Nestler, Amb. 317.2° Folio 40 recto (Mendel I). (Stadtbibliothek Nürnberg, published in Treue et al. 1965, Taf. 73.)

⁸ Articles that were in the shop of Thomas Trewe, haberdasher of London, in the Parish of St. Ewen, in the Ward of Farndone Within, in the month of July in the second year of the reign of King Richard the Second etc. (= 1378). . . 2 dozens of laces of red leather, value 8d.; one gross of poynts [tagged laces] of red leather, 18d. . . (Riley 1868, 422).

too. But the laces sold there (without and with mounted chapes) were made of red leather and are therefore not a good comparison to braided textile laces. The production of leather needs a tanner but then the lace chape maker bought the leather in whole and cut it himself. Evidence is provided by three images in the ‘Hausbücher der Nürnberger Zwölfbrüderstiftung’. Behind three lace chape makers, Ulrich Klain († 3 April 1582), Friderich Müllner († after 3 March 1610) and Hannß Engelbrot († 23 November 1630)⁹, uncut dyed hides are hanging on a stack. Therefore, at least leather laces and aiglets were made by the same profession.

Cutting leather strips does not need great skill. Braiding some of the more complicated patterns of textile laces, on the other hand, at least demands a fair amount of initial instruction and practice.

To date, the known medieval images depicting loop braiding all show female workers¹⁰ whereas the etching from around 1635 shows two men. While linen, cotton¹¹ and wool laces could also be produced by domestic work – the materials not too hard to obtain – silk laces were probably fashioned by silkwomen or Seidmacherinnen (silk makers) in cities like London and Cologne (Wensky 1982; Lacey 1987). A petition of the London silkwomen of 1463 mentions ‘laces, corses, ribans, frenges of silke and of the threde, throwen silke, silke in any wise embroidered, golden laces, tyres of silk or of poyntes, . . . gurdels’ etc. as their products (Lacey 1987, 188). To learn all skills of the craft apprenticeships could range from three to four years in Cologne (Wensky 1980, 99; 1982, 641) to seven years in London (Lacey 1987, 192 f.¹²). Of course the time was not only spent learning the art of fingerloop braiding but on other aspects of the trade as well.

Conclusion

At Lengberg Castle archaeological investigations of several parts of the building were carried out under the direction of Harald Stadler (Institute for Archaeologies, University of Innsbruck) in 2008. During the research a filled vault was detected below the floorboards of the 2nd storey. The fill consisted of dry material in different layers, among organic material such as worked wood,

⁹ Amb. 317b.2° Folio 39 verso (Mendel II), Amb. 317b.2° Folio 79 recto (Mendel II), Amb. 317b.2° Folio 105 verso (Mendel II), for the images see www.nuernberger-hausbuecher.de. Date accessed: 30.04.2014.

¹⁰ One shows the Virgin Mary with baby Jesus, about four or five years of age, the child holding no more than one loop on each hand. Museum of Cathedral Works (Museo dell’ Opera del Duomo)? No record of the artist’s name and the date of the work (Speiser 2006).

¹¹ E.g. the account book of the Lords of Vilanders (south Tyrol) lists ‘Item 4 g. vmb pawmmwollein garn’ (translation: also 4 gulden for cotton yarn) being bought for the inhabitants of the castle (Goller 2007, 87).

¹² 3 July 1454, John Eland, armiger of Parva Stirton, Lincolnshire, apprenticed his daughter Elizabeth to John Langwith, citizen and tailor of London, and Elene his wife, silkwoman, of the ward of Walbrook for seven years at 6d. per annum.

leather and textiles. Investigations on construction techniques and the archaeological feature pointed to a dating of the finds to the 15th century. This date has now been confirmed by five radiocarbon dates carried out at the ETH-Zürich. Among the textiles are eighteen fingerloop braided or plaited laces, nineteen laces from the 15th century and one of yet undetermined age. Five woven textiles are decorated with loop braided laces. Thirteen lace chapes (also called aglets or aiglets), one with the remnants of lace still inside the tube, together with fragments of garments with eyelets show the use of some of the laces as fastening strings.

Fingerloop braiding is a hand-braiding technique requiring no assistance of tools except for an optional beater. The working ends of the threads are paired and form loops rather than being separate as in braiding with open ends (plaiting). One end of the bunched braiding threads is fixed on a support, and each loop is mounted on a finger of the hands (finger-held method). Or one may slip the sequentially arranged loops around the hands (hand-held method). To make a braid, you exchange the loops, one at a time, between two hands in a particular sequence.

Five braids from Lengberg still show the loops on either both or one end. A ‘practice piece’ or swatch and fragments that can be classified as waste from tailoring suggest that the laces were most likely made by the female inhabitants. Moreover, the garments onto which the laces had been sewn are either intimate female underwear or baby clothes. Therefore, one can expect them to be fashioned by the wearer/mother herself rather than by a professional tailor. Aside from the linen fabric that might or might not have been woven at the castle, it stands to reason that the decorative elements would have been made by the seamstress. All patterns used to braid the laces of Lengberg are rather simple and do not extend to more than five loops. To produce these patterns you do not need great skill and practice making the employment of a professional lace maker unnecessary. However, this does not exclude the possibility that some of the laces, especially the silk lace, could have been bought. This was very probably the case with the lace chapes also found in the castle. Lace chapes are attached to lace ends to make it easier to thread them through eyelets in garments.

It seems quite certain that most of the laces from Lengberg were made by inhabitants of the castle but who was involved with commercial lace production remains sketchy. To date, all evidence indicates that braiding textile laces, at least in medieval times, was a task performed mainly by female workers. Either by nuns (as in the Vadstena Convent), professionally by silkwomen or Seidmacherinnen, or as domestic work. Yet no specialization to solely produce these laces seems to have been in existence. It also remains unclear, who was responsible for the production of laces made of linen or wool. Silkwomen only processed silk. Surely the demand for laces, especially for those used to fasten clothes and made from more ordinary fibres, would have been too great to be covered by domestic work alone. Lace production in nunneries probably met the requirements for liturgical but not for secular uses and lace chape makers supplied the market only with leather laces.

Hopefully further research on (new) archaeological finds or medieval manuscripts, inventories, guild laws, images, etc. will help to answer these questions. Until then – bearing in mind some of the more complex patterns to be found in the manuals (and the skill and dexterity they require) – we are not ashamed to braid!

Acknowledgements

The author would like to thank the Tyrolean Science Fund for their sponsorship and the Tyrolean Regional Government as the owner of Lengberg Castle. I would also like to specially thank Joy Boutrup, Gina Barrett and Katrin Kania for their help in identifying the patterns of the braids. The Institute Amattler d'Art Hispanic, the Rosgartenmuseum Konstanz (Constance) and the City Library Nuremberg provided much appreciated help acquiring the copyright permissions for the images in their possession.

References

- Anonymous.** 1655. *Natura exenterata, or, Nature unbowelled by the most exquisite anatomizers of her: wherein are contained, her choicest secrets digested into receipts, fitted for the cure of all sorts of infirmities, whether internal or external, acute or chronicall, that are incident to the body of man*, Printed for, and are to be sold by H. Twiford, G. Bedell, and N. Ekins. London.
- Bargmann, U.** 2001. Revised 2002, 2006. *Das Lintwurm portlein*. – L-M BRIC News 4, from <http://www.lmbric.net/n4/n4.html>, accessed 30 April 2014.
- Benns, E. & Barrett, G.** 2005. *Tak v bowes departed a 15th century braiding manual examined*. Soper Lane, Great Britain.
- Boutrup, J.** 2010. Analysis and interpretation of braids from the London excavations. – *Archaeological Textiles Newsletter*, 50, 20–29.
- Boutrup, J.** 2011. *Die Schnüre am Gürtel Philipps von Schwaben*. – *Des Kaisers letzte Kleider: Neue Forschungen zu den organischen Funden aus den Herrschergräbern im Dom zu Speyer*; [companion book of the exhibition „Des Kaisers letzte Kleider – Rettung der organischen Funde aus den Kaiser- und Königsgräbern im Dom zu Speyer“, Historisches Museum der Pfalz, Speyer, 10. April – 30. Oktober 2011]. Ed. M. Herget. Minerva, München, 114–117.
- British Library MS Harley 2320.** *Miscellany of treatises relating to prognostication, astrology and braiding in verse and prose, 1st quarter of 15th century – 17th century*. Manuscript from Harley collection (MS Harley 2320). Directions for braiding, ff. 52f–70v. British Library (http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Harley_MS_2320, accessed 30 April 2014).
- Goller, J.** 2007. *Das Rechnungsbuch der Herren von Vilanders von 1415–1417 (Tiroler Landesarchiv, Handschrift 523): Auswertung und Transkription*. Diplomarbeit, Geschichte, Universität Innsbruck.
- Griffiths, J. & Edwards, A. S. G.** (eds). 2001. *The Tollemache Book of Secrets. A Descriptive Index and Complete Facsimile with an Introduction and Transcriptions Together with Catherine Tollemache's Receipts of Pastery, Confectionary & c.* The Roxburghe Club. London.
- Hörmann, M.** 2003. *Lengberg*. – *Pustertal*. Eds W. Beimrohr, M. Hörmann-Weingartner & O. Trapp. Athesia, Tyrolia-Verl., Bozen, Innsbruck, 545–556.
- Huggett, J. & Mikhaila, N.** 2013. *The Tudor Child. Clothing and Culture 1485 to 1625*. Fat Goose Press, Lightwater.
- Kinoshita, M.** 1998. *What is the Loop-Manipulation Braiding Technique?* <http://www.lmbric.net/>, accessed 30. April 2014.

- Krabath, S.** 2001. Die hoch- und spätmittelalterlichen Buntmetallfunde nördlich der Alpen: Eine archäologisch-kunsthistorische Untersuchung zu ihrer Herstellungstechnik, funktionalen und zeitlichen Bestimmung. (Internationale Archäologie, 68.) Marie Leidorf, Rahden, Westf.
- Lacey, K.** 1987. The production of 'Narrow Ware' by silkwomen in fourteenth and fifteenth century England. – *Textile History*, 18: 2, 187–204.
- Nutz, B.** 2013. Bras in the 15th century? A preliminary report. – NESAT XI. The North European Symposium for Archaeological Textiles XI: 10–13 May 2011 in Esslingen am Neckar. Eds C. Nübold & J. Banck-Burgess. Marie Leidorf, Rahden, Westf, 221–225.
- Riley, H. T.** (ed.). 1868. 'Memorials: 1378', Memorials of London and London Life: In the 13th, 14th and 15th centuries (1868), 415–428 (<http://www.british-history.ac.uk/report.aspx?compid=57718>, accessed 30 April 2014).
- Santonino, P.** 1947. Die Reisetagebücher des Paolo Santonino, 1485–1487. Aus dem Latein. Übertr. von R. Egger. 13th ed. Kleinmayr, Klagenfurt.
- Speiser, N.** 2000. Old English Pattern Books for Loop Braiding: A Monograph Critically Comparing English Instructions from the 15th and the 17th Century. Self-published, Arboldswil.
- Speiser, N.** 2006. A Florentine fresco shows loop-manipulation warp-twining. – L-M BRIC News 7, from <http://www.lmbric.net/n7/n7.html> (accessed 30 April 2014).
- Speiser, N., Estham, I. & Franzén, M.-L.** 2011. Loop Braiding in Swedish Bridgettine Tradition: Investigations and Results. Jennie Parry, Leicester.
- Stanley, E. G.** 1974. Directions for making many sorts of laces. – Chaucer and Middle English Studies in Honour of Rossell Hope Robbins. Eds R. H. Robbins & B. Rowland. Allen & Unwin, London, 89–103.
- Treue, W., Goldmann, K., Kellermann, R., Klemm, F., Schneider, K., von Stromer, W., Wissner, A. & Zimbauer, H.** (eds). 1965. Das Hausbuch der Mendelschen Zwölfbrüderstiftung zu Nürnberg. Deutsche Handwerkerbilder des 15. und 16. Jahrhunderts. Bruckmann, München. Available online: www.nuernburger-hausbuecher.de (accessed 30 April 2014).
- Wensky, M.** 1980. Die Stellung der Frau in der stadtkölnischen Wirtschaft im Spätmittelalter. – Quellen und Darstellungen zur hansischen Geschichte N.F. XXVI. Ed. H. Geschichtsverein. Böhlau, Köln, Wien.
- Wensky, M.** 1982. Women's guilds in Cologne in the Later Middle Ages. – *The Journal of European Economic History*, 11: 3, 631–650.
- Wunderlich, W.** 1996. Weibsbilder al fresco: Kulturgeschichtlicher Hintergrund und literarische Tradition der Wandbilder im Konstanzer Haus „Zur Kunkel“. Stadler, Konstanz.
- Zimmerman, J. A.** 2007. Textiel in context: Een analyse van archeologische textielvondsten uit 16e-eeuws Groningen. Stichting Monument & Materiaal, Groningen.
- Zimmerman, J. A.** 2012. 16th century textiles from the town of Groningen in social context. – Medieval Urban Textiles in Northern Europe. Eds A. Haak & R. Rammo. (MT, 22.) Tartu Linnauseum, Tartu, 79–96.

Beatrix Nutz

DRGENS SN WIR VS NVT SCHAME – PUNUMINE POLE HÄBIASI. 15. SAJANDI AASPAELAD LENGBERGI LINNUSEST

Resüme

2008. aastal toimusid Innsbrucki ülikooli arheoloogainstituudi juhi Harald Stadleri juhtimisel arheoloogilised kaevamised Lengbergi linnuses Ida-Tiroolis Austrias. Linnuse kolmanda korruse põrandalaudade eemaldamisel avastati kuiv-materjaliga täidetud võlvipealne, mis muu hulgas sisaldas orgaanilisi leide, näiteks

töödeldud puitu, nahka ja tekstiili. Ehitusviisi ja ladestuse analüüsi põhjal võib leiud dateerida 15. sajandiga, dateeringut kinnitavad viis ETH-Zürichi laboris analüüsitud radiosüsinikuproovi.

Võlvipealselt avastatud tekstiilide seas on 19 aaspaela või palmitsetud paela, neist 18 pärineb 15. sajandist ja ühe vanust ei ole õnnestunud täpsustada. Viis kootud tekstiili on kaunistatud aaspaelaga. 13 paelaotsikut, millest ühe sisemuses on säilinud paelakatke, osutavad osa paelte kasutamisele kinnitusnõõrina.

Aaspaelte punumine on puhas käsitsitöö, mis ei vaja abistavaid töövahendeid, välja arvatud (võimalusel kasutatav) suga. Erinevalt tavalisest punumisest moodustavad aaspaelaks põimitavad lõimed aasa. Põimitavate aaslõimede üks ots kinnitati alusele ja iga aas võeti eraldi sõrmele (sõrmemeetod); teine võimalus oli libistada aasad üksteise järel käe ümber (käemeetod). Paela valmistamiseks põimiti aasad üksteisest läbi vastavalt mustrile.

Kolmel Lengbergist avastatud põimikul on endiselt kas ühes või mõlemas otsas silmus. Üks harjutustükk ja kaks muud katket, mida võib tõlgendada õmblustöö jäägina, osutavad, et põimikud valmistasid suure tõenäosusega linnuse naissoost elanikud. Veelgi enam, leitud aaspaelad olid õmmeldud kas naistealuspesu või lasterõivaste külge. Seetõttu võib eeldada, et rõivaesemete kujundamisega tegeles pigem selle kandja või tema ema, aga mitte elukutseline rätsep. Lisaks linasele kangale, mis oli võib-olla linnuses kootud, on põhjust arvata, et kaunistused tegi õmblejanna. Kõik Lengbergi aaspaelte punumisel kasutatud mustrid on üsna lihtsad ega ulatu üle viie aasa. Selliste mustrite valmistamine ei nõua erilisi oskusi ja seetõttu polnud vaja spetsiaalset käsitöölist palgata. Siiski ei välista see võimalust, et mõned paelad, eelkõige siidist pael, muretseti kellegi teise käest. Sama puudutab ka linnusest avastatud paelaotsikuid. Viimased on vajalikud selleks, et paelu saaks tõmmata läbi rõiva-aasade ja neid kinnitamiseks kasutada. Võimalik, et osa paelu jõudiski linnusesse koos paelaotsikutega.