

THE ORIGINS OF KNITTED FABRICS

By Braham Norwick

For at least two hundred years, serious scholars in the textile field have insisted upon the relative novelty of knitting in Western Europe. Back in the 18th century, a supposed anachronism in the poem *Tragedy of Ella* was immediately denounced when Thomas Chatterton published it. He had claimed to have copied it from a manuscript of the mid 15th century, originally written by the monk Thomas Rowley. The lines at issue were:

"She sayde as her whyte hondes whyte hosen was knytinge,
Whatte pleasure ytt ys to be married!"¹

Subsequent research² has found a slightly earlier reference, dating between 1452 and 1456, to "one knytt gyrdll." This is in a recorded will kept at the church of St. Peter and St. Wilfred in Ripon. So the "whyte hosen" and knytinge" were not anachronisms and the scholars of the late 18th century were wrong.

But that does not push knitting origins back much further than previously admitted. There are other indications of early knitting which, for a similar length of time, have also been scorned by textile scholars. These involve literary translations from the ancients, like Pliny and Ovid.

Pliny's monumental work was translated and published by Louis Poinciset de Sivry between 1771 and 1781. In book VIII are expressions like "scutulato textu" and "scutulis dividere," which the French writer translates as knit fabrics, "tissus à mailles," and even goes further, writing "les etoffes à mailles sont une invention des gaules," that knitted fabrics had been invented by the early French.³

Nicholas Desmarest, a well known technical expert of that period disputed the translation. He had investigated gloves and hosiery found at St. Germain des Près in 1799 and at that time attributed to the Bishop Ingon who had died in 1025. The fabrics were a form of network which he compared to Alençon lace. The items are illustrated in one report by Alexandre Lenoir⁴ and described in more detail by Desmarest in a publication of 1807.⁵ Elisa Maillard⁶ and Michelle Beaulieu⁷ have both written about these items and have attributed them to Pierre de Courplay, buried in 1334. They are described as "point à l'aiguille," a form of macrame lacework. Michelle Beaulieu has however noted many early gloves which were knit, such as those of Saint Remi at Saint-Sernin of Toulouse, those at the Cathedral of Moutiers-Tarentaise in Savoie, and of Saint Bertrand of Comminges. She notes they are listed in the church inventories as gloves "faits à l'aiguille," and translators should note the singular form, that they were made with a needle. Michelle Beaulieu also refers to the

descriptions of episcopal gloves by the Hermit Honorius about 1120 and Guillaume Durand in the second half of the same century as being "inconsutiles," without seams. This she takes as evidence the gloves had to be knitted. However, three dimensional textile structures without seams can be produced by macramé network or even by braiding as with maypole systems.

In a more recent version of Pliny, in the Loeb Classical Library, H. Rackham⁸ translates the Latin as a "check pattern." But it seems significant that the special material came from only a few places, Salacia in Lusitania, a fishing area of Narbonne, and also in Egypt. Moreover, worn out textiles, made of it can, according to various translations, be "darned," "redyed" or otherwise handled to restore it as good as new. So why not translate it as deknit and reknit?

Another translation, this time from Ovid's *Art of Love*, by H. Montgomery Hyde⁹ reads:

"I hate her who gives because she must, and who, herself unmoved, thinks of her knitting while she's making love."

The Loeb Classical Library translation by J. H. Mozley¹⁰ has her merely "thinking of her wool."

Henry Yule¹¹ in the last century, translated medieval manuscripts of the 13th-century travellers as mentioning knitting. He has Marco Polo describing the monks of St. Barsamo in the Taurus area as "continually knitting woolen girdles." In his *Cathay and the Way Thither*¹², he has Odoric of Pordenone stating that in Huz, a Persian city, "'tis the custom for the men to knit and spin." Eileen Power¹³ translating the Latin of Eudes Rigaud, Archbishop of Rouen in the mid-13th century, has him referring to the knitting by the local nuns.

Understanding one's contemporaries is not always easy. Early English is more of a problem. Translating from one language to another is an art and not a science. Our serious textile scholars have possibly rightly tended to ignore all such references, however appropriate they may appear. Translations are hard to make as perfect and scientific equations.

However, textile scholars have also been largely ignoring the existence of quite solid evidence for early knitting. With awakening interest in archaeology in Great Britain during the latter part of the 18th century, gold and silver artifacts of the past, when found, began to be preserved rather than being melted down. Clubs of amateurs were formed, museums established. So we have today, mostly hidden away in the basements or back rooms, a wealth of important crafts information. Most of it has not yet been studied

by textile experts. But the objects are there, awaiting careful study by people who really know the difference between a twist, braid, knot, link or a knit structure. The decisions, in many cases, cannot be done by simple visual inspection, even by an expert. It often takes a stereomicroscope, and in some cases may even require judicious cutting, since much early work is so fine and so tightly closed that external inspection alone cannot determine internal structure.

A group of professional knitters has been working for several years on definitions for knitted fabrics. This is under the auspices of the International Standardization Organization, and multi-lingual glossaries have been prepared.¹⁴ The group early concluded knitted fabrics must be defined on the basis of structure. They do not want to define knitted fabrics on the basis of mechanical details in manufacture. So knitted fabrics are still knitted fabrics whether they have been formed from a single or many threads, by single, double or many needles (or no needle at all). A purely topological description of a unit structure for a yarn, a weave, a twist, braid, loop, knit or knot can be made. In twisting, braiding, or what Irene Emery¹⁵ classes as simple linking, an individual yarn in an individual structure unit, when seen in projection, two-dimensionally, makes only two changes of direction. In a woven fabric, ignoring the selvage, the yarn makes no change in direction. In a knitted fabric, it must make four.

When knitting is classed as a structure and not a technique, the view of textile history is automatically changed. The question of a specific technique employed to obtain a knitted structure becomes a secondary question.

Some years ago, after following false leads to so called "wire knits" which had always led to mistranslations of "cotte de mailles," I came across an "antique" Tibetan gong attached to a bone striker by means of a silver wire knit chain. It resembled in structure the small tubular knitted fabrics made with pinned spools, and it had open stitches and four wales. Similar chains are currently being made in Nepal in many of the craft shops. In a series of stalls and shops in various places, like Saigon, Marrakesh, the souks in the middle east, and of course London and New York, one can still find old but undatable wire belts, necklaces and bracelets of knitted wire construction. Modern pieces are being made in many parts of the world.¹⁶ The Yemenite Jews, before they were airlifted to Israel, made tubular knitted wire jewelry and decorative pieces.¹⁷ But none of such material is readily dated. More important for the textile scholar is that reasonably datable archaeological pieces in reputable museum collections have already been identified as being knit.

The outstanding items are the earliest known examples of flat knitting in the British Isles. They are two intricately knit wire decorations set

into the base of the Ardagh Chalice. Ever since the remarkable photographs published by Robert M. Organ have been available ¹⁸, no expert can deny that knitting was known in Ireland in the 8th century. For the Ardagh Chalice was not imported. The writing on the chalice is like that in the Book of Kells.

L. S. Gogan ¹⁹ discusses these pieces we now know are knit and describes them as "trichinopoli chain. . .cut and flattened." He also mentions "trichinopoli" chain in the Brighter Hoard, a guard chain on the Tara Brooch, the Clonmacnoise hinge pin, and a scourge in the Trehiddle Hoard. From the photographs published by Robert Organ which show these panels from the Ardagh Chalice clearly, it is obvious that while they may be a form of what is called trichinopoly work, they were not originally tubular, then cut and flattened. But this comment by L. S. Gogan does give us a clue as to what he at least thought trichinopoly work was. Despite considerable searching, no technical definition has yet been found. Gogan seems to have thought it a form of spool knitting or maypole type braiding.

While the archaeologists did not recognize the insets on the Ardagh Chalice as knit, many of them did recognize knitting in numerous other pieces. It is, of course a stroke of luck when this has happened. Robert Organ, despite his clear photographs of the Ardagh Chalice knitted structures, and the presence of his many colleagues at the British and other Museums involved, labelled them "woven-wire work."

The first to recognize knit wire as such is Edward Hawkins ²⁰ in his 1847 "Account of Coins and Treasure Found in Cuerdale." He describes an item which "is probably a portion of an armlet, in the collection of Mr. Assheton, and it may be included amongst the chains; it is composed of fine wire knitted precisely in the same manner as a modern stocking; it is hollow, so that a large pencil may easily be passed within it; one end is inserted into a flat piece of silver, bent, the sides riveted together, to contain the silver ring by which the two ends were united to fix it on the arm." The Cuerdale Hoard is dated ca. 900 a.d. Hawkins continues in the same journal ²¹ some months later: "In this the article is produced from one continuous wire knitted precisely as a modern stocking is made, as will be perceived by examining accurately the forms of the stitches both on the inside and the outside." Immediately after this description, J. J. Worsaae of Copenhagen wishes to attribute the silver work to oriental origin. R. Dundas ²² reported in the same journal two years later a find at Norrie's Law, Largo, Fife (on the northern shore of the Firth of Forth), one which had been made thirty years before. He describes "a fragment of fine, interlaced (sic) chain, of silver, bearing resemblance in workmanship to the portions of chain found with Saxon coins and remains in Cuerdale."

A series of similar Scottish finds are described in various issues of the *Proceedings of the Society of Antiquaries of Scotland*. The first item of interest was discovered in 1858 and published in 1862.²³ It indicated "a small fragment of silver chain, of a flat knitted pattern." It was part of the "inventory of ancient silver ornaments and found buried between the parish church and the Burn of 'Rin', and a short distance from the shore of the bay of Skail, in the parish of Sandwick, mainland of Orkney." With it were coins of Aethelstan Rex and Cufic coins of Nasr ben Ahmed. Both date to the 10th century. J. Anderson²⁴ in the same journal but published several years later, in 1876, detailed the Croy Hoard with which was found a "band of knitted work of fine Silver-Wire, knitted with the ordinary knitting stitch, which resembles the modern trichinopoly work, and connects this find with those of Cuerdale and Largo." The Croy hoard was found with a coin of Coenwulf, King of Mercia (8-9th century). In Anderson's book, *Scotland in Pagan Times*²⁵, he describes a length of chain from a Viking grave at Islay, Ballinaby. It is appropriate to quote the description of both this chain and that from Croy given by Helen Bennett of the National Museum of Antiquities of Scotland:

"I find them to be of identical looped structure, made from long lengths of wire, which at first sight strongly resembles stocking stitch. Both are in the form of flattened tubes, that from Croy having 16 'stitches' per round (7 stitches and 6 rows per cm) and that from Ballinaby having 6 'stitches' per round (6-2/3 'stitches' and 7-1/2 rows per cm). Although the fabrics strongly resemble knitting, on examining them under the microscope I found the structure to be different. Whereas in knitting the loops are usually drawn through those of the preceding row, in these cases the loops have been drawn through the two preceding rows. . ."²⁶

From the *Proceedings of the Society of Antiquaries of Scotland* for 1880 there are still other reports²⁷ of knitted wires. Joseph Anderson refers to them at Islay, Croy, Skail in Orkney, Cuerdale and from the Isle of Inchkenneth. In addition to the confirmation of knitted structures from Helen Bennett, we have from Katherine East of the British Museum assurance that both the Trewiddle and the Inchkenneth pieces are really knit.

There are undoubtedly many similar pieces on the continent of Europe awaiting recognition. Michele Beaulieu has drawn to attention a chain kept at the cathedral of Uppsala, which had belonged to Caterina Jagellonica.²⁸ A book of photographs, *Early Finnish Art*²⁹ shows a 12th century piece from the area of Sipilänmäki, Sakkila. In the same book is an earlier

chain from the Låmsä treasure trove which may well be another of the knits, but the picture is not clear enough to be sure.

At Yale are some of the artifacts from Dura Europus. The textile knits have long been recognized as such.³⁰ However, there is a silver necklace, now in small fragments, which was described by Phyllis Ackerman³¹, and it too is a knit tubular structure, though she described it as "composed of braided silver wires. . ." She considered that a gold necklace was similarly, though more finely made, but it is almost certainly a link construction, like the majority of existing chains. Link chains are inherently more flexible, but most important, permit division of labor. Knit chains do not. Division of labor is like bad money in Gresham's law; it tends to drive out the solitary craftsman.

There are large numbers of wire-worked pieces in many museums where there has been no satisfactory effort to unlock the mystery of structure or technique. There seems little doubt that, just as it is now certain there was considerable knitting going on in the British Isles long before the 15th century, similar discoveries will be made elsewhere. The material merely has to be looked for by knowledgeable people having not only the funds, the time and equipment, but also the permission and cooperation of the museum authorities to examine the pieces as closely as needed. Really important work needs to be done in many places, examining Scythian, Etruscan, Greek and Roman wire work, before assigning any dates to the origins of knitting in the west. Enough solid evidence is already around to make the conjectures worth putting to test.

In an initial publication on the origins of knitting, I foresaw³² that more vigorous searching was bound to uncover the kind of information presented in the latter part of this short paper. It now seems probable that the next ten years will see a similar growth in our knowledge of knitting on the continent of Europe. Most sincere thanks must go to the many colleagues who have helped and encouraged the work so far, Professor Stuart Piggott, Michele Beaulieu, Katherine East, Helen Bennett, Jean Mailey, Leopold Wallach, Susan B. Matheson, to name only those whose help has already borne fruit.

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piscinas provinciae Narbonensis, similis et in Aegypto, ex qua vestis detrita usu pingitur rursusque aevo durat." "Plurimus vero licis texere quae polymita appellant Alexandria instituit. Scutulis dividere Gallia."

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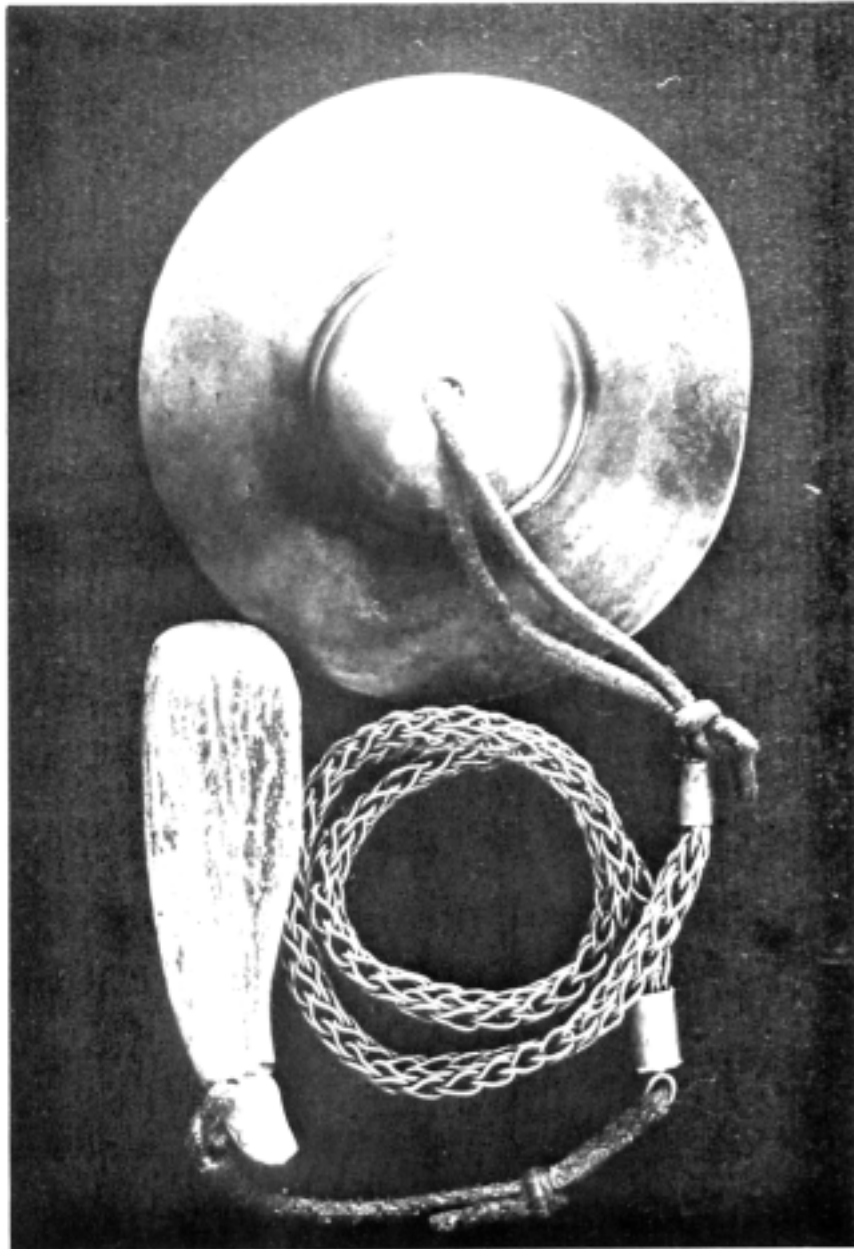


Plate 1: "Antique" Tibetan gong attached to bone striker by silver knitted wire chain.

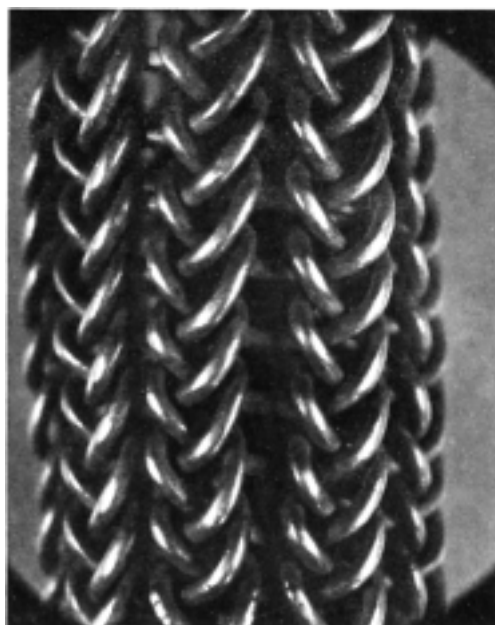


Plate 2: Details of old but undatable knitted wire chains in the author's collection.

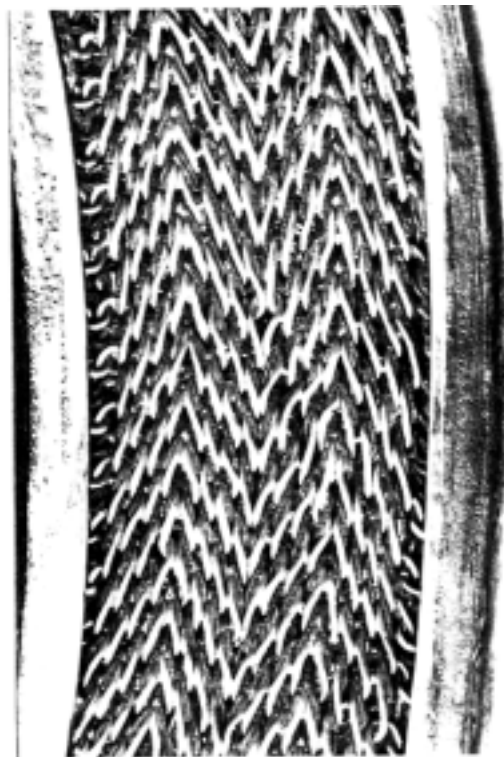


Plate 3: Herringbone knitted wire fabric set into base of Ardagh Chalice.

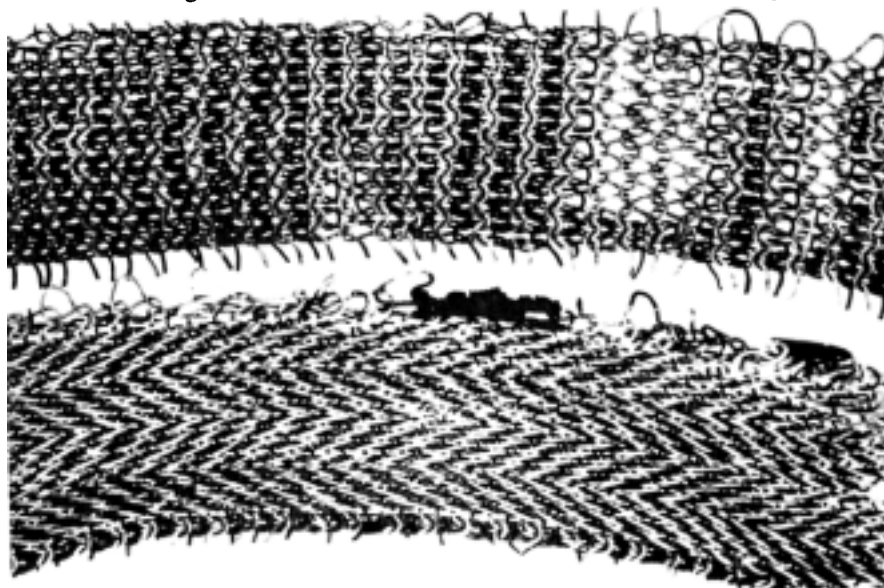


Plate 3A: Sections of the two knitted bands set in the base of the Ardagh Chalice (removed for cleaning).



Plate 4: Detail of chain on a scourge in the Trewhiddle Hoard.



Plate 5: Silver wire knitted Band from Ballinaby.



Plate 6: Dura-Europas silver chains.