Anna Rosa Tricomi

Textile Archaeology in Roman Venetia

Background

As confirmed by literary and epigraphic sources from the 1st century BC to the late Roman period, the production and trade of wool and woollen fabrics played a primary role in the economic system of Roman Venetia, area large part of the Augustan *Regio X* (which corresponds now to north-eastern Italy). The topography and natural resources must have contributed positively to the emphasis on sheep breeding, since it contains plains, alpine pastures and coastal salt works.

The PhD research presented here is one of a long line of studies developed by scholars of Padua University over the last two decades. Comprehensive studies began with an investigation of iconographic, literary and epigraphic evidence of textile processing in the ancient Venetian region, followed by a topographic approach aimed at identifying the routes of transhumance and the relationship between breeding and farming. Later, the main interest turned to archaeological data, especially concerning the analysis of settlements specialised in sheep breeding, which culminated in the years 2004-2010 with the only excavation of Roman sheep farm in Italy thus far (found in the Ca'Tron estate, in the Altinum area, near Venice's North Lagoon) (Busana, Cottica and Basso 2012; Busana *et al.* 2012).

More recently, new attention has been paid to archaeological textile tools, which are essentially the only archaeological traces left by textile processing in our region. (Because of the terrain features, fibres, yarn and textile fabrics are rarely preserved in Italy: a piece of wool from Adria, studied by Margarita Gleba, is the only Roman fabric known from Venetia until now: Gleba 2012).

In 2009 the *TRAMA Project – Textiles in Roman Archaeology: Methods and Analysis* began, which consisted, at that time, of a survey of Roman textile tools, limited to the western area of ancient Venetia (the provinces of Brescia, Verona, Vicenza and Padova), in order to collect data for further investigations on the technology and economic, social and ideological aspects of textile craft.

PhD research

Within the same *TRAMA* Project, my doctoral project (University of Padua, Italy, 2011-2013) has been a natural development, the main goals of which can be summarised in two steps: to define the number of textile archaeological records and, in so doing, complete the systematic survey of textile implements, published and unpublished, found in the eastern Venetia region (the provinces of Rovigo, Venezia, Treviso and Belluno) and to build a plausible framework for textile making based on specific analyses of finds and their contexts of provenance (Fig. 1).

In the eastern district 1630 finds were recorded that include shears, spindle whorls, spindle shafts, distaffs, spindle hooks, loom weights and spools from the 2nd century BC to the 5th century AD, a sample believed to be significant and able to reveal trends with a good degree of reliability.

In order to consider such a large number of artefacts, a comprehensive database using open source software (SQLite interfaced with Openoffice.org Base) was

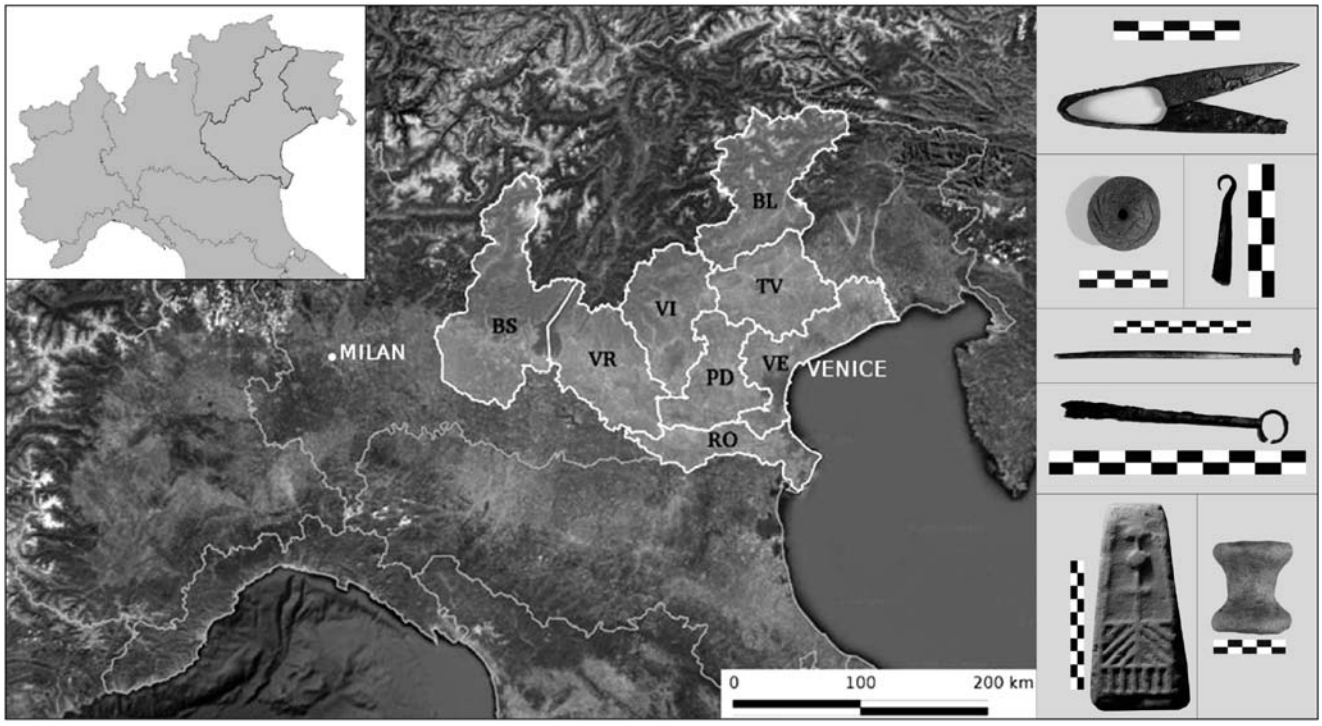

Fig. 1. Area of research and classes of tools recorded (Illustration by author, Photos: courtesy Ministero dei Beni e delle Attività Culturali e del Turismo – Soprintendenza per i Beni Archeologici del Veneto).

created (Busana, Francisci and Tricomi in press). The database includes two different tables linked to one another: a 'Site Table' (where data was collected about the discovery and the context) and a 'Finds Table' (containing administrative data, class of object, raw material, morphometry, weight, decoration, condition, wear, chronology, bibliography and archive data of each tool, using fixed vocabularies). Each item was then documented using photos and sometimes drawings. The database was also linked to a GIS that allowed us to manage data more efficiently and to perform statistical and spatial analyses.

After a general overview of the *chaîne opératoire* of textile processing and a focus on the 'textile industry' of the investigated area from ancient sources and environmental data, the study focused on artefacts, particularly on their functional and morphometric parameters.

Textile tools

The shears class in the database includes only two items. Finds of shears are rare in the Roman period in the whole of central and eastern Venetia, and this may be because of the state of research and/or the effects of ancient recycling. This contrasts with the data available for western Venetia, where the frequency of finds in funerary contexts seems to be connected to Celtic cultural influences.

Spindle shafts and distaffs are also very rarely found, apart from rare examples in durable material, as they were made mostly of wood and bone and are therefore subject to problems of conservation and recognition if they only survive in a fragmentary condition.

Of the spinning tools, the most numerous are the spindle whorls, corresponding to 182 items, although the larger class of recorded objects is that of loom weights (1630 implements). Spools are rare too, perhaps for technological reasons.

Quantitative analysis carried out on measurable parameters allowed us to identify particular morphological categories and a specific range of measures.

As regards the spindle whorls, they were divided into six morphological categories. The discoid-shaped are the most attested, followed by the truncated cone-shaped and the spheroid ones. Other morphologies such as the biconical, the bitruncated cone-shaped and the hemispheroid spindle whorls appear in lesser numbers. The majority of items weigh between 15 g and 30 g, with a peak between 20 g and 25 g.

Amongst the loom weights it is possible to distinguish two morphological macro-groups: the discoid-shaped and the truncated pyramid-shaped. The latter includes three variants related to shape and size of the lower base:

1. truncated pyramidal with a rectangular base, presenting a regular profile from the side
2. truncated pyramidal with a thin rectangular base, where the side profile gets thinner below
3. truncated pyramidal with a square base, where the side profile gets thicker below

As proved by experimental archaeology, great attention has to be paid to the loom weight's profile, because thickness variations affect the position of the loom weights when they are hung side by side on the loom and, therefore, the general result of the fabric woven (Mårtensson *et al.* 2007; Mårtensson *et. al.* 2009; Andersson Strand 2012, 210-212).
The truncated pyramidal loom weights with rectangular base are the most numerous, a shape which is confirmed as the most common. As concerns the weight, the majority of loom weights is concentrated in a specific weight range, since most of them weigh between 500 g and 800 g, with a peak between 600 and 700 g.
Chronologically, it should be emphasised that no loom weight dates past the 2nd century AD, which suggests a decline in this period of the use of the warp-weighted loom, which was probably gradually replaced by the two-beam loom or another kind of loom, as testified in literary and archaeological evidence (Wilson 1938, 21; Hoffmann 1964, 327; Wild 1992, 12-17).
Considering the physical and functional parameters of objects is a fundamental step that highlights the high degree of standardisation of a lot of implements and reveals the presence of tools specialised for the production of particular types of fabric.

Conclusion

In light of the recent results of experimental textile archaeology, available data in our region seems to indicate a production of yarns and fabrics in the Roman period of intermediate quality, neither too fine nor too coarse, with a few rare exceptions. Such a framework does not contradict what is known from the ancient literary sources that tell us about a sort of Cisalpine primacy in the production of coats and blankets (in Latin *gausapa*, *lodices* and *trilices*): not characterised by fineness and elegance, but famous for their hardiness and heaviness.
A further stage of research has considered the parameters of the weight of spindle whorls and loom weights according to the archaeological context, rural or urban. Both classes of tools are heavier and more standardised in the countryside than in the cities. We think that this variation is very relevant, since it represents an index that can reveal a varied yarn and textile production, finest in the city and heavier in the country, thus destined for different consumers or markets. Furthermore, the urban yarns and fabrics appear to have been more differentiated as regards the quality, suggesting a demand for a wider range of products, perhaps aimed at customers of different social and economic classes. The rural areas seem instead to have been engaged in intense textile production at a slightly lower qualitative level.
Very interesting has been also the comparison between finds from funerary contexts and those from settlements, a topic which concerns the symbolic meaning attributed to textile tools. Spindle whorls and other spinning tools are well attested in Roman tombs as grave goods of female burials, while loom weights or spools rarely appear in cemeteries and, if present, the burial is not marked by gender indicators. Thus this reveals a specific selection, where only some objects – *i.e.* the spinning tools – are invested with a particular symbolic significance. Spindle whorls, spindle shafts, distaffs and hooks in the Roman world were considered not only as activity markers, but also as symbols of feminine virtue and moral qualities, relating to the role that Roman society attributed to women. Otherwise, this meaning is not extended to weaving tools, showing a discontinuity with previous pre-Roman habits, when local Venetian Iron Age people used to put loom weights, spools and even miniature looms as grave goods in the burials of the most influential women. The change can be seen as the result of a different organisation of textile manufacture in Roman times when the weaving activities were removed from the purely domestic sphere of women and in all likelihood implemented at a larger scale and carried out in appropriate workshops by male individuals, workers or slaves as well.
In conclusion, the research presented here offers an innovative and systematic analytical approach to archaeological textile evidence, trying to go beyond simple typology. It is focused on preserved textile tools, in order to identify the fabrics that unfortunately have not survived. The inspiration was provided by studies carried out by the Centre for Textile Research (CTR) in Copenhagen. In a more general perspective, this work stands as a possible model for the study of these kinds of archaeological records, which may potentially be useful in other spatial and chronological contexts.

Bibliography

Andersson Strand, E. (2012) From spindle whorls and loom weights to fabrics in the Bronze Age Aegean and Eastern Mediterranean. In M.-L. Nosch and R. Laffineur (eds), *KOSMOS. Jewellery, Adornment and Textiles in the Aegean Bronze Age*. *Proceedings of the 13th International Aegean Conference/13e Rencontre* égéenne *internationale, University of Copenhagen, Danish National Research Foundation›s Centre for Textile Research, 21-26 April 2010*, Liège: Peeters. (Aegaeum Vol. 33), 207-214.

Busana, M.-S., Cottica, D. and Basso, P. (2012) La lavorazione della lana nella Venetia romana. In M.-S. Busana and P. Basso (eds), *La lana nella Cisalpina romana: economia e società. Studi in onore di Stefania Pesavento Mattioli*, *Atti del Convegno, Padova-Verona, 18-20 maggio 2011*, Padua: Padua University Press, 381-531.

Busana, M.-S., Bon, M., Cerato, I., Garavello, S., Ghiotto, A., Migliavacca, M., Nardi, S., Pizzeghello, D. and Zampieri, S. (2012) Agricoltura e allevamento nell'agro orientale di Altino: il caso di Ca'Tron. In M-S. Busana and P. Basso (eds), *La lana nella Cisalpina romana: economia e società. Studi in onore di Stefania Pesavento Mattioli*, *Atti del Convegno, Padova-Verona, 18-20 maggio 2011*, Padua: Padua University Press, 125-167.

Busana, M.-S., Francisci, D. and Tricomi, A.-R. (in press) SQLite-SpatiaLite, una soluzione "portabile" per archeologi. Il caso del database per il progetto "Archeologia della lana: allevamento, produzione e commerci nella Cisalpina romana". *ArcheoFOSS. Open Source, Free Software e Open Format nei processi di ricerca archeologica, Proceedings of 8th Workshop (Catania 18-19 giugno 2013).* Archeologia e Calcolatori, Supplemento 5.

Gleba, M. (2012) Lo sviluppo delle fibre di lana nell'Italia preromana. In M.-S. Busana and P. Basso (eds), *La lana nella Cisalpina romana: economia e società. Studi in onore di Stefania Pesavento Mattioli*, *Atti del Convegno, Padova-Verona, 18-20 maggio 2011*, Padua: Padua University Press, 351-363.

Hoffmann, M. (1964) *The Warp-Weighted Loom*. Oslo: Universitetsforlaget.

Mårtensson, L., Andersson Strand, E., Nosch, M.-L. and Batzer, A. (2007) Technical report experimental archaeology, part 3: loom weights, tools and textiles – texts and contexts research program. *The Danish National Research Foundation's Centre for Textile Research, University of Copenhagen.* Retrieved on 17 October 2014 from www.ctr.hum.ku.dk/tools/Technical_report_3_experimental_archaeology.PDF

Mårtensson, L., Nosch, M.-L. and Andersson Strand, E. (2009) Shape of things: understanding a loom weight. *Oxford Journal of Archaeology* 28 (4), 373-398.

Wild, J.-P. (1992) The Roman loom in Western Europe: the evidence of art and archaeology. *Vlaamse Vereniging voor Oud en Hedendaags Textiel Bulletin*, 12-17.

Wilson, L.-M. (1938) *The Clothing of the Ancient Romans*, Baltimore: Johns Hopkins Press.

Author: annarosa.tricomi@gmail.com