

Textile Analysis in Northern Finland

Erika Ruhl
Department of Anthropology
University at Buffalo*

Introduction and Background

This project centers on a number of burials beneath the floors of churches in Northern Finland, dating between the 17th and 19th centuries. The burials originate from churches in Oulu, Haukipudas and Keminmaa, and exhibit excellent preservation due to cold temperatures and dry, well-ventilated air. As a result, many of these burials are mummified, and the associated textile remains are in excellent condition. While these assemblages include both adult and sub-adult burials, this project specifically addresses the sub-adult individuals within the sample. In addition to the standing churches, the rediscovery of previously unanalyzed material recovered from Hailuoto Church through salvage excavations during the 1980s offers an additional data set in a unique context for comparison. The church was destroyed by fire in 1968 and the artifacts excavated from Hailuoto Church represent a unique set of preservation and conservation requirements and challenges in contrast with the intact burials from Oulu, Haukipudas, and Keminmaa. As a result of the rediscovery of the Hailuoto collection, work this summer included recataloguing the collection and associated records, in addition to continued textile analysis on the excavated remains and samples for all churches.

Although the mummified remains in the standing churches exhibited excellent preservation at the time of sample collection, a number of recent concerns have been raised regarding changes in the microclimate beneath the church floors. This includes the impact of modern renovations and generally increasing temperatures, with an accompanying

increase in mold, mildew, and animal activity. Exploring preservation options has been the focus of a multi-year study, conducted in conjunction with the individual churches. Sanna Lipkin (PhD, University of Oulu, Finland) works with the textiles and textile evidence associated with this project, and directed this research project. Dr. Lipkin's skills in existing methods of textile analysis, in addition to her focus on developing new theoretical approaches, made her an invaluable resource.

Research questions addressed concepts of identity, particularly the cultural construction of children, childhood and gender in the context of the relatively high child mortality rate during this period. As part of this analysis, the project explored several hypotheses concerning the practice and performance of mourning within pre-modern northern Finnish culture in the Pre-Modern Era.

Theoretical Approaches

Identity theory, with an emphasis on children and childhood theory, represents a key theoretical approach throughout this project. Children represent an often invisible facet of culture, whose record is often ignored in archaeological research.¹ It is important to recognize that the concept of childhood is culturally constructed. By exploring conceptions of children, childrearing and the process of acculturation and socialization, it is possible to explore the cultural construction of childhood within this context.² Additionally, children provide an interesting cross-section of other aspects of culturally constructed identity – including gender, family status, rank, religion and ethnicity – which can in turn contribute to a deeper understanding of these concepts on a broader scale. Due to the mummified state of the burials at the standing churches, it is in often possible to make a sex determination on children and infants, something which is

impossible with purely skeletal remains. This offers the unique opportunity to discuss aspects of child-specific theoretical approaches, including cultural conceptions at the intersection of age and gender.³ The number of child and infant burials present in this sample makes it an ideal way to explore the cultural construction of childhood, the intersectional aspects of age and other aspects of identity, in addition to familial approaches to coping with the high infant mortality rate and loss of children.

While many studies have addressed childhood in mortuary contexts – one of the places where children are arguably easiest to “see,” this approach goes beyond the mere discussion of the burials to the intersectional aspects of children and childhood identity as represented by these remains.⁴ By exploring the dividing line between “children” and “adults,” this project brings greater depth and understanding to current conceptions on the cultural construction of childhood, recognizing children as agents capable of both using and manipulating cultural conventions for their own purposes. Additionally, this project explores the impact that children – and the loss of a child – has on community constructions and conceptions of children and childhood on a broader scale.

Available Material

During this period, a combination of poor sanitary and nutritional conditions resulted in child mortality rates of forty percent by the age of four, with higher levels during epidemics. In examining the physical remains of these children, their mummified condition allows for sexing their remains, which enables the theoretical approaches mentioned above. In addition to the physical remains, coffin markings and a number of church records are also available to assist with individual identification.

One of the unique aspects of these burials is the lack of every-day clothing worn by the deceased. Instead, they are covered by half-ropes, which are then pinned to the coffin lining to create the illusion of fashionable clothing. These garments were roughly sewn and pinned together, and were specifically crafted for the funeral from repurposed textiles. Evidence from Haukipudas indicates that the style of the robe differed for girls and boys, with the bodice of girl’s robes resembling adult female attire and boys’ robes including a frill or lace collar consistent with adult male attire.

In addition to these half-ropes, which occur in both adult and sub-adult burials, children’s burials are accompanied by a variety of silk flowers held in the hands and formed into crowns. These appear in burials of children as old as ten, but not in adult contexts. There are also indications of sexual differentiation in the placement of these crowns and wreathes, with girls having additional flower décor. Written sources suggest that the girls’ burial often represented them as brides regardless of their ages.

Other clothing articles which appear in these burials range from caps and hats to gloves and stockings. In the case of children, the caps used in the burial represent regional differences. Those at Haukipudas showing little or no gender differentiation and were created from scraps of cloth specifically for inclusion in the burial, in contrast with those present at Hailuoto, which represent items actually worn by the child during their lifetime, and differed based on the child’s gender.

Methodological approaches

As part of taking samples at Haukipudas, Keminmaa, and Oulu, a portable Dinolite microscope camera was used to create images for samples where textiles

themselves are unavailable, or too fragile for regular handling. Samples were taken from both the warp and weft of textiles in these burials, before reinterment. In the case of textiles from Hailuoto, both the Dinolite and stereoscopic microscopes were utilized in the lab to explore and document previously excavated textile items. This process served to record and organize relevant data to create a record of the textile material available. Data collected from these images and materials included the warp and weft threads per inch, individual warp and weft thread width, weave patterns, and overall preservation quality. Microscopic analysis was then used to analyze fiber type (wool, cotton, silk, bast or other, Figs. 1-4), and to assess

preservation quality on the fiber-level. This allows for discussion of material, quality and occasionally local versus nonlocal varieties.

In addition to the more standard approaches to textile analysis, CT scanning has been utilized for non-destructive analysis of coffin construction, human remains and textile presence. Due to their small size, child and infant burials were ideal for scanning purposes. Several of the sub-adult coffins were taken in for CT scans prior to reinterment. This offers new non-destructive approaches to textile analysis, in many cases without opening the coffin itself. This non-destructive approach opens up a wide variety of new forms of minimally-invasive textile analysis for future use.

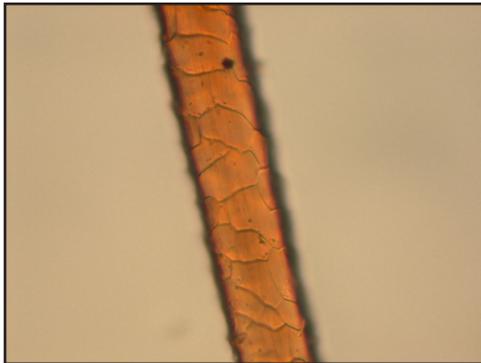


Figure 1: Wool, as viewed under compound microscope. Sample taken from Haukipudas site. Photo by E. Ruhl.



Figure 2: Cotton, as viewed under compound microscope. Sample taken from Haukipudas site. Photo by E. Ruhl.

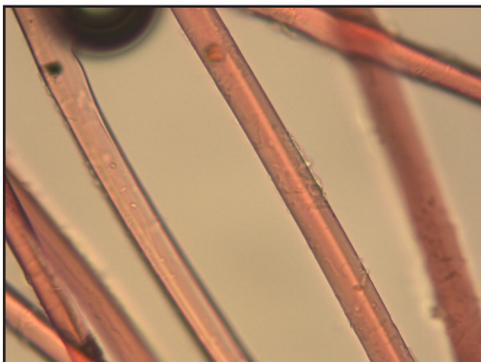


Figure 3: Silk, as viewed under compound microscope. Sample taken from Haukipudas site. Photo by E. Ruhl.



Figure 4: Bast, as viewed under compound microscope. Sample taken from Haukipudas site. Photo by E. Ruhl.

Conclusion and Outcomes

The information gained through the use of these theoretical and methodological approaches contributes to a data set addressing the ongoing discussion of conceptions of children and childhood, the visibility of children in the archaeological record, the intersection of childhood and other aspects of identity, and children as social actors in their own right. In the context of this project, work completed during the 2015 field season enables a closer examination of the cultural construction, socialization and enculturation of children and childhood during this period in northern Finland.

The 2015 summer field season resulted in a co-authored paper presented at the 2016 Society for Historical Archaeology Conference in Washington DC (Jan 6-9 2016). Titled “Mourning for Children in northern Finland – Funerary attire in the 17th-18th century contexts,” the paper utilized textile analysis completed over the 2015 summer field season in context with historical documents, records and practices to explore mourning for children in a time with high child mortality rates. While tangentially related to the theoretical approach, this project has added significance for its potential to assist local churches in implementing plans to ensure the continued preservation of these burials. In addition to these short-term research goals, this summer’s field season also contributed to the ongoing data collection which will form the basis of both my advanced exams and doctoral dissertation.

*Acknowledgments:

Many thanks to IEMA, the University at Buffalo, the University of Oulu, and the interdisciplinary Mummy Project. This project would not have been possible without the continued without the ongoing help, guidance and support of Dr. Sanna Lipkin.

Endnotes:

- 1 Baxter 2005
- 2 Lucy 2005
- 3 Baxter 2005
- 4 Baxter 2005

Works Cited and Related Project Readings:

Baxter, J.E. 2005. *The archaeology of childhood. Children, gender and material culture*. Oxford: AltaMira Press.

C. Gillis & M.-L.B. Nosch, eds. 2007. *First Aid for the Excavation of Archaeological Textiles*. Newbury, VT: Oxbow Books.

Jenks, C. 1992. *The sociology of childhood: essential readings*. Brookfield, VA: Gregg Revivals.

-----, 2005. *Childhood*. 2nd edition. New York: Routledge.

Lipkin, S and T. Kuokkanen. 2014. "Man buried in his everyday clothes – attire and social status in early modern Oulu." In *Focus on Archaeological Textiles*. MASF 3:40-53.

Lipkin, S., K. Vajanto, T. Kallio-Seppä, T. Kuokkanen, S. Niinimäki, Väre, Tiina; van Bommel, and M. Bommel. 2015. "Funeral dress and textiles in 17th and 19th century burials in Ostrobothnia, Finland." In *Aspects of the Design, Production and Use of Textiles and Clothing from the Bronze Age to the Early Modern Era: Proceeding of the NESAT conference in Hallstatt May 2014*, edited by K. Grömer and F. Pritchard, 209-222. edited by S. Lipkin & K. Vajanto. *Archaeolingua* no. 33. Budapest: Archeolingua Alapítvány.

Lucy, S. 2005. "The archaeology of age." In *The Archaeology of Identity. Approaches to gender, age, status, ethnicity and religion*, edited by M. Díaz-Andreu, S. Lucy, S. Babić & D.N. Edwards, 43–66. New York: Routledge.

Moore, J, and Scott, E. 1997. *Invisible People and Processes*. London: Leicester University Press.

Peacock, E.E. 2007. "Study of archaeological textiles intimately associated with human remains –Where is the Ethical Dilemma?" In *Nesat IX Archäologische Textilfunde –Archaeological Textiles*, edited by A. Rast-Eicher, R. Windler, 12–16. Ennenda: ArchoTex.

Sofaer, J. 2007. "Engendering children, engendering archaeology." In *The Archaeology of Identities: A Reader*, edited by T. Insoll, 87-96. New York: Routledge.