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Knowledge transfer in heritage cultural craft, damask weaving

ABSTRACT

The hand weaving of damask is no longer a craft that is commonly learned and very few books on the subject have been published in the last century. Damask weaving still exists among private practitioners, but what happens to the knowledge when nobody knows how to dress a loom and weave anymore? The aim of this study is to describe and compare damask weaving from a learning perspective in order to generate knowledge of how damask weaving is described in the literature and how the knowledge is communicated to increase understanding of the learning process and to generate a theoretical understanding of practical knowledge transfer. The method used is a literature study and open interviews with people who teach damask weaving. The study shows that the literature does not provide enough information on how to dress and weave damask. The interviews give a deeper understanding of the practical knowledge. The analysis shows that it is difficult to use only cognitive reading as interpretation from the body and hands are needed and the different steps need to be dissected in detail.

Keywords:

heritage cultural craft, knowledge transfer, damask weaving.

INTRODUCTION

There are countless images of old jacquard linen damask tablecloths with folded napkins and artful table settings, but not many reference guides on how to set up and use a damask loom. According to the latest published book on damask from Norway, there are currently three books on the subject published in Norway and Sweden between 1828 and 1982, out of which one is Norwegian. Hand weaving, specifically in damask, is no longer a craft that is commonly learned. For example, courses in hand weaving have been removed from the curriculum at the textile education in University. However, hand

weaving is still used by private practitioners, small companies making textiles for churches and by handweaving guilds. There are also factories using handweaving as a complement to machine weaving for showcasing purposes. But how does someone learn how to weave damask by hand? The literature available does not deliver enough information on the subject. Instead, the knowledge must be traded. What is the information trading process like? Research on the subject of handcraft in other areas does exist, but so far nothing has been written on the subject of damask hand weaving (dressing the damask loom) in Scandinavia.

Damask

Damask¹ is a weaving technique where the weave structure is in twill or satin and the pattern is made by variations between warp-float satin and weft-float satin effect. The word damask (FR. damas, DE. Damask) shares an etymological background with the city of Damascus. In ancient times, Damascus was a trading centre for the silk export going into Europe. The weaving technique damask was initially developed as a part of the Oriental silk weaving school and has later been used for linen weaving. Damask in linen was made possible by the developments made in linen processing and linen weaving during the Middle Ages in France and the Netherlands. A combination of techniques taken from linen weaving and silk damask created the linen damask. In addition, patterns taken from the Italian silk damask during the 1400s and 1500s furthered the development of the linen damask. Flamish weavers initially used silk, but due to lack of material they switched to linen and continued to develop patterns in damask (Cyrus-Zetterström, 1979; Topelius, 1985). Due to religious persecution, many Flemish weavers moved to the Netherlands and thus the country became outstanding in the area of creating table cloth using damask, often using imagery from the Bible. The clients were usually nobles or courts, therefore motives using weapons, name slates and hunting scenes also became common (Cyrus-Zetterström, 1979).

The Chinese damask from the Tang era was often created using different twill bindings, for example a 6-shaft twill in warp effect and a 3-shaft twill in weft effect. Satin was also created using methods other than damask. The later use of satin binding in damask is due to the fact that it produces a smoother and glossier surface than the twill (Topelius, 1985). The Draw loom was used for weaving linen damask in the same way it had been used for weaving silk. In the Flanders as well as in Florence, religious figures were used for patterns in the 1400s. In the 1500s, new patterns were created in French and Dutch damask textiles, such as coats of arms. The Dutch damask was popular during the 1600s (Topelius, 1985).

Initially, a drawboy was placed on top of the loom in order to pull up the pattern. However, an invention by Dagon in 1606 made the process easier since the drawboy now could stand next to the loom and pull up locks. The next step in the development was the invention by Josef Marie Jacquard in 1801, where the drawboy was replaced by a construction with punch cards, a so-called Jacquard loom. The machine became wide-spread across Europe during and after the 1830s (Cyrus-Zetterström, 1979). The technique and the patterns developed with the Jacquard loom, as its use of punch cards allowed for more detailed patterns. This technique has later been transferred to mechanical looms (Topelius, 1985).

Swedish damask weaving started in 1698 in Stockholm due to the burning of Stockholm Castle in 1697 (Topelius, 1985). Before the fire, damask had only been imported - using white tablecloths in damask with napkins in the same pattern was highly popular during the time. The use of white tablecloths in damask decreased in the mid-1900s, partly due to the fact that machine-woven tablecloths were not seen as exclusive since more people were able to afford them, and partly due to changes in fashion as more colourful tablecloths rose in popularity (Cyrus-Zetterström, 1979).

Handweaving still exists today but how does a novice learn to dress a damask loom and weave damask and how does the existing research field describe this? The field of craft knowledge will first be described to give a frame of reference to the study.

CRAFT KNOWLEDGE

The process of learning a craft has - thanks to the research program The Craft Laboratory created by Goteborg University - recently become a subject of scientific research. Research on craft can be defined as such: “Craft knowledge is theoretical in the sense that the purpose is to explain and understand the process of the craft. The knowledge is also practical, since a part of the explorational methodology and the results of the examinations is being able to perform these procedures and monitor the processes” (Almevik, 2017) (own translation).

Another term used in the field is autoethnography, a method wherein a person uses their own experience as a basis for exploring a larger context. Although it is difficult to both execute and describe a process at the same time, it's important in order to perform these types of experiments to analyse and interpret the creative processes (Ehn, 2011).

An example of a study in practical knowledge is described by a glassblower in training. The author states that the chain of events needs to be dissected with a shift from cognitive analysis to analysis with a bodily, physical focus. This makes the transfer, development and modality of practical knowledge much more difficult. It also means that to become a scholar in the field of practical knowledge, phenomenological considerations need to be made in order to be informed in the field of practical knowledge and to create a larger understanding of the processes (O'Connor, 2007).

A study made on the rebuilding of the medieval corner church Södra Råda describes the reconstruction experiments that have embodied knowledge on historical building processes and advice in the modern workers and craftsmen that are doing the reconstruction (Almevik & Melin, 2015). Knowledge based on experience is common in the field of art and design as an integrated part of the praxis. However, it is not as common in discussions about research methodology. One study (Niedderer & Reilly, 2010) examines the process of identifying the relationship between creative practical experience and knowledge production in art and design in order to develop procedures used to organize investigations or praxis

Polanyi (1966) argues that we know more than we can tell, which is what he calls tacit knowledge. In craft knowledge there is a way of knowing by experiencing and doing. The practice of the handcraft is so close to the craftsperson that it is difficult to be able to explain and analyze the process of the handcraft. Polanyi (1966) separates expressed and personalized knowledge, meaning the knowledge that can be described in words and the internal knowledge. Ingold (2012) argues the opposite - that knowledge can be showed and learned from the inside even if it is not expressed in words. That means that the craftsperson is not silent. A person doing handcraft can explain their process, though it does not need to be in words (Ingold, 2012).

There are differences in awareness in the practice of handicraft. The concepts *focal awareness* and *subsidiary awareness* are two concepts that Polanyi (1958) describes as mutually exclusive. He describes how the internal process that occurs when a pianist shifts focus from the piece he is playing (subsidiary awareness) to observing what he does with his hands (focal awareness) results in the pianist getting confused and being forced to stop (Polanyi, 1958). Subsidiary awareness is when our consciousness uses tools as actions in our body. We live in them and assimilate them as part of our existence (Polanyi 1958).

Piper (2016) argues that handicraft knowledge praxis constructs knowledge that is precoded through practical experience. This knowledge can be decoded by reflection and analysis. It can thereafter be recoded for further development (Piper, 2016). One example of this type of development is weaving that is recoded into a binary form in a Jacquard loom after decoding the weaver's knowledge. One way of understanding practical knowledge is to use Heidegger's and Gadamer's concept of understanding. The phenomenological and hermeneutic understandings are wider than the concept of knowledge. It is also more extensive than scientific knowledge. It can therefore be used to understand practical knowledge, and to understand various practical knowledge dimensions like wisdom, empathy, attention, reflection and recognize the value of craft (Svenaeus, 2009). Another way of explaining practical knowledge is the relation between the hand, eye and brain. The eye constantly scans, judges and adjusts the hand at the same time as the eye decides the tempo. The conscious brain is focused on

what the person sees and the hand is so ingrained in the focus that the movement is a part of what the person sees (Sennett, 2008).

To summarize what unites earlier research on the subject, there are difficulties to catch, describe, verbalize, theorize and transfer craft knowledge. For theoretical analysis of the material in this study the silent knowledge that is described by Molander (1993), the verbalized and expressed knowledge that is described by Polanyi (1966) with the concept focal awareness and subsidiary awareness, the transfer of knowledge (Ingold, 2012), the relation between the hand and mind and the language to transfer knowledge (Sennett, 2008) is used.

Purpose

The purpose of this study is to describe and compare hand weaving in damask from a learner perspective to generate knowledge about how damask is described in literature and how it is traded in person in order to create a practical understanding of the learning process of hand weaving in damask, and also a theoretical understanding of practical knowledge trading.

Research question

How is the dressing of a damask loom described in literature and how does the description differ from the one made by a hand weaving teacher in practice.

METHOD

Phenomenography is used to analyze data collected from half-structured interviews with specific individuals. Phenomenography in this case is the process of trying to understand human learning and the ways in which people try to understand the world as a result of their studies. This study will examine how knowledge of handweaving in damask is traded, which is why phenomenography is a useful method.

Choice of method

First a literature study is made together with an examination of other media that is used as a basis for trading knowledge of handweaving in damask. This is done in order to examine the basis of how the dressing of a damask loom is described in literature. Second interviews are held with three teachers of handweaving in damask.

The literature was selected from a database and library search. The search is limited to Scandinavian literature due to the fact that weaving is described differently in English literature. The literature that is analyzed in this study are books written by (Cyrus-Zetterström, 1970, 1979; Ekenmark & Ekenmark, 1828; Eriksson, Getzmann, Gustavsson, & Lovallius, 1993; Ingers & Becker, 1955; Johansson, 1982; Nygård, 2018)

The people interviewed are three teachers in damask weaving that were willing to participate. The teachers were scattered across Sweden which meant that travelling to meet them. This was necessary due to the risk of losing body language if using phone interviews. It was an open-question interview about education, experience and knowledge, with follow-up questions added depending on what came forward in the interview.

The study is limited to handweaving, though the aim of the study is to gain a deeper understanding of transferring knowledge in handweaving of damask and specially dressing a loom. The reliability in the study is helped by the fact that the damask teachers are experienced and well known in the field. The author of this study has experience in weaving damask and has an understanding for the vocabulary used in the literature and during the interviews. The major limitation of the study is that there are few teachers in the craft and that the literature is scarce.

RESULT

The literature review tackles two types of literature. One type is the literature that describes woven damask and the other type is damask literature that describes the method and with the aim to teach the reader how to weave. In the first category a few patterns are shown in the end of the book, however not with the purpose of teaching the reader (although they can be an inspiration for the reader). As examples in the books in the first group are descriptions of damask (Granath, 1990; Henschen, 1949; Krumins, 1974; Paludan & Wieth Knudsen, 1989; Ridderstedt; Thorman, 1938). The first literature group shows the factories that produced damask, for example Vadstena fabrik (Topelius, 1985) and regarding how damask can be photographed (Lindberg, 1967). It could also be collections in mansions (Stavenow-Hidemark, 2003) or in geographical areas (Cyrus-Zetterström, 1979; Thorman, 1943). Several books are written about known damask weavers like Emma Wiberg (Karlsson, 1978), Carl G Widlund (Eldvik, 1999), the sisters Svensson (Mårtensson, 1987) and Anna- Britta & Josef Edvinsson at Kinnekulle (Austrin, 1992). It's also possible to find patterns in damask weaving in magazines such as *Vävmagasinet* and *Hemslöjd*.

The second category of books describes how to dress a damask loom, but books on how to weave and set up the loom are fewer. The latest book comes from Norway, and is named *Damaskvev* (Nygård, 2018). The book *Damast* by Gertrud Ingers and John Becker 1955 is the most comprehensive book and cover all parts of how to dress a loom (Ingers & Becker, 1955). Two more books contain practical descriptions, one being *Opphämta och Damast* (Johansson, 1982) and the other one *Handbok i konstvävnader*, which has a few pages on damask but cover more calculations and basic weaving (Cyrus-Zetterström, 1970). There are also a few pages in the book *Väv, gamla och glömda tekniker* (Eriksson et al., 1993) on the subject. The oldest book comes from Ekenmark and sisters, a book that apart from how to dress a loom also contains drawings on how to build a damask loom (Ekenmark & Ekenmark, 1828).

Dressing a loom can be divided into different sections, such as preparation, warping, pre-slaying the loom, beaming, tying-up and sample weaving pattern drawing. The literature study and the interviews are both categorised using these different sections of the dressing process. The same sections was used during the interview with the teachers.

The literature study shows that the different sections are described with different amounts of focus and also with contradictions in the different steps, for example on how many treads to hold in your hand when warping. It varies from 3 treads to 20. Some literature puts a great emphasis on the tie-up, while some literature does not mention it. The interviews also shows that different sections are given different amounts of focus by the different teachers.

ANALYSIS AND DISCUSSION

The author of this paper has a good understanding of how to dress a damask loom, but despite this there are difficulties in catching details when the respondent speaks freely and jumps between subjects and include personal details. The literature assumes that the reader has a preunderstanding of how to dress a loom, because parts of the descriptions are missing and some parts of the descriptions are contradictive in the literature.

Autoethnography (Ehn, 2011) means that a person uses their own knowledge as a basis in a more generalized context. To both describe and do at the same time is difficult. It's not easy for the respondents to describe handcraft in a few sentences during a short interview and to catch the knowledge in tape and text. Both the authors of the literature and the respondents have solid experience in the subject, which shows in several ways. What is common knowledge is not expressed in the literature or from the respondents. To be experienced as well as participating in knowledge generation (Niedderer & Reilly, 2010) is needed to develop praxis. Respondent C says that it takes experience to warp with many threads, and respondent B says that they need seeing for the weaving to be good. The expressions "experience" and "seeing" can also be related to the bodily sensation for capturing small details (Berggren Torell & Ranglin, 2014).

Polyani (1966) argues that we know more than we can tell about how to perform and experience practical work. This becomes clear through the literature study and the interviews. In the literature information is left out. In the interviews, more detailed answers surface in the follow up questions. Several times the respondents answer by showing motions with their hands, and in the follow up questions the answer is verbalized. Polyani (1966) uses the expression *pronounced* and *personal knowledge*. All the respondents have taught for a long time and have personal knowledge, but it's more pronounced in one person. The respondent has a pupil-based focus and expresses that the student has to succeed and feel good about the work, otherwise they are not going to continue. One respondent read the authors body language and commented on that the respondent thought the author understood because of the way the author held shedstics. The respondent read the body language and without words had a pupil focus as well.

To tell, but not in words, argue Ingold (2012), is a way to transfer knowledge. The literature contains a lot of pictures that transfers knowledge. Some knowledge is given in the pictures but is absent in the text. Sometimes there is an explanation beside the picture. The respondents are often showing motions with their hands, and sometimes they walk to the loom to show or fetch books or materials to show the result – “if you do it like this, this is the result.”

To dress a loom it is important in understanding how the loom works and how damask is constructed, argues Nygård (2018). That is the same concept of understanding as Heidegger uses. Phenomenographic and hermeneutic understanding is wider than the knowledge concept, and Svenaeus (2009) argues that it is suitable to use for practical knowledge. The deeper the knowledge a person has is, the more aspects the person can hold and the greater ability they have to relate to these (Fejes & Thornberg, 2009). Both the literature and the respondents show how different knowledge types and approaches result in different consequences. The interview respondents adjust the knowledge according to the authors understanding and tries to read the reception of the information. The respondents deepens the explanations to the follow up questions and use technical terms in community of praxis, for example explaining why a warp stick or a button is used or not when warping. The tacit knowledge thus becomes expressed (Molander, 1993).

The use of the hand can sometimes be so ingrained that the movement is part of the person (Sennett, 2008) That becomes clear when Respondent A and B shows their answers in the loom instead of explaining in words. It means that the actions are not verbalized or expressed. According to Svenaeus (2009), their knowledge is not deemed to be silent. The respondents are describing more clearly when they stand beside the loom. Polanyi's (1958) concept pairs focal awareness and subsidiary awareness are mutually exclusive. This becomes clear when the respondent shows instead of telling, and when they become silent before a description or an explanation. The respondent's consciousness uses the loom as a part of their own body.

This study shows that the literature does not provide enough information to dress and weave damask. The interviews give a deeper understanding of the practical knowledge. The analysis shows that it is difficult to use only cognitive reading, and that interpretation from the body and hands are needed, and the different steps need to be dissected. There are more studies needed in damask weaving both in archive and in practical studies. Damask weavers like Widlund, Sisters Svensson, Edvinsson and Wiberg are gone and can no longer transfer knowledge, it is now quiet. But there is quiet knowledge among the living that does not need to be quiet (Molander, 1993; Polanyi, 1966; Svenaeus, 2009), whether if it is in movement (Ingold, 2012) or verbalized (Medbo, 2016). To further the knowledge in Polanyi's (1966) concept pair focal awareness and subsidiary awareness, there need to be further development in the understanding of dressing a damask loom and in general hand craft knowledge - a concept that the author of this study suggests is *vocal awareness*, to add one more dimension.

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¹ DAMASK: A firm, glossy, Jacquard-patterned fabric that may be made from linen, cotton, rayon, silk, or a combination of these with various manufactured fibers. Similar to brocade, but flatter and reversible, damask is used for napkins, tablecloths, draperies, and upholstery