

Conservation theory for enhanced craft practice

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ABSTRACT: Taking off from a case of heritage conservation of a medieval corner-timbered tithe barn, this paper explores what an enhancement of craftsmanship in the conservation process implicates in terms of conservation theory. The still on-going conservation of Ingatorp tithe barn, Sweden, started off when the barn was found to originate from the 13th century. As crafts researchers we were invited to carry out a forensic building investigation, in association with the owners, a small congregation. As a result of our collaboration, the congregation took the principle stand to involve local craftsmen and parishioners in the restoration. The craftsmen selected wood from local forests and reconstructed the historic procedures of craftsmanship in the restoration processes.

The outcome of the case study consists of a reflected description of the conservation process, which focuses and problematizes the experiences from the enhancement of craftsmanship. The conservation process has involved different agents of expertise and trans-disciplinary judgments but also community-led initiatives for education, dialogue-seminars and hands-on participation. In conclusion, the restoration has offered more than a rehabilitated physical appearance and new interpretations of the pastness of things. A process that enhances craftsmanship and community involvement may also activate values and generate know-how that affirms the relevance of heritage conservation in present society.

1 INTRODUCTION

1.1 *Research questions*

To improve conservation practice, heritage conservation as a professional field needs to gain a better understanding of how different forms of expertise and skill coalesce in their material interventions in heritage objects (Jones & Jarrow 2014). Among the actors involved in conservation, the craftsman is the one who spends most time on site, close to the source material, and whose innumerable decisions have the greatest impact on the final result (van Balen 2008, Almevik 2016). Nevertheless, the craftsman is often reduced to a means of production, and is thus detached from the historical inquiry, the design and the structural analysis. This inconsistency is poorly explored in previous research. The leading questions for this paper are: How may craftsmanship be enhanced in the conservation process? What does augmented involvement of craftsmen implicates in terms of conservation theory? The notion of authenticity has a significant effect on the choices of conservation actions, and is a keystone in the history and theory of conservation (Jokilehto 2006, Stovel 2008, Jerome 2008). Furthermore, arguing that contemporary heritage conservation has to

take on a community-based approach to support local heritage values: How may craftsmanship be used in participatory and community-based methods?

1.2 *The case and context of research*

The research questions have been investigated through the conservation of a 13th century corner-timbered tithe barn in Ingatorp, Sweden. Until recently the barn was an anonymous building used for storage of equipment. It was paid new attention by coincidence, when the Swedish Association for Building Preservation visited Ingatorp to see the art nouveau church. What awoke the interest of one the members, Henrik Larsson, was the high pitched shape of the barn and the typical marks from an early medieval hewing technique.

An initiative was taken to make a dendrochronological analysis that dated the building to 1229 ± 10 years. This evidence makes the tithe barn the second oldest preserved wooden building in Sweden. Only twelve medieval corner timbered churches still exist in Scandinavia. The oldest is Granhult, which dates from sometime after 1217 and might be the oldest still-standing original corner-timbered church in the world.

The news about Ingatorp had a large impact in Swedish medias, and also affected the local community values. Visitors that previously came to see the art nouveau church now headed for the barn.

As crafts researchers we were invited to carry out a forensic building investigation, in association with the owners, a small congregation. As a result of our collaboration, the congregation took the principle stand to involve local craftsmen and parishioners in the restoration. The craftsmen were to select wood from local forests and to apply historical procedures of craftsmanship in the physical interventions.

The conservation process was also an object for research. The Craft Laboratory, which is a national centre for safeguarding of traditional craftsmanship, was asked to coordinate a research network for the local building team. The project was connected to the reconstruction of the medieval wooden church in Södra Råda, where experiences in similar craftsmanship and construction technique have been investigated and practiced (Almevik & Melin 2015).

1.3 Research method and concepts

The research method is practice-led and experiential, using practice as an arena for inquiry and the methods of practice as methods of inquiry (Rust et al 2007, Wood 2006). We who undertake the research are also practitioners in the building team. Being both research subjects and practitioners who affect the research object, our work can be described as action research. The objective to enhance craftsmanship was a manifest point of departure, but the inquiries of how and with what implications to conservation theory and community involvement, have been practiced and theorized throughout the process. Concepts and perspectives are influenced by semiotic pragmatism and environmental dynamics (Ginzburg 1999, Ingold 2013, Gibson 2015) and focused on contemporary theory of conservation (Muñoz Viñas 2005, Silberman 2015, Sully 2015).

The conservation process is the unity of analysis and a cohesive concept including documentation and building investigation, dialogue and participation, valuation and hands on restoration. The process is not linear or iterative, but rather parallel and oscillating. The conservation process is deliberately outstretched in time and still ongoing. The wide time frame is necessary for using local materials and historic procedures, and also beneficial for the research.

The article is structured in line of the conservation process. To begin with, following the introduction, a forensic approach in building investigation is depicted and theorized, and furthermore how craftsmen's perception may contribute in documentation and historical inquiry. The third section summarizes the actions for participation, involving dialogue seminars, courses and co-production of building material. The fourth section describes the structural diagnosis and physical interventions, and in the fifth section the considerations of authenticity of both tangible and intangible heritage are further scrutinized. In the last part the



Figure 1. Ingatorp tithe barn to the left. It's plausible that the barn was built in the early 13th century for storage of tax-in-kind to support the vicarage. The crafted architecture connects to the contemporary wooden gothic churches, with boxed timber, high pitched roofs and leaning gables. The building had originally visible tarred logs and the roof was covered with tarred wooden roof shingles. In the late 16th century the exterior walls were covered with shingles as well. The building has been in active use as storage in almost 800 years. Photo: G. Almevik.

conclusions are summed up, suggesting a turn from the cult of authenticity to a keen interest in heritage conservation's connectivity to present society. Enhancing craftsmanship is a mean, not only to produce and restore, but also to connect heritage communities, projects and teams of professionals.

2 INVESTIGATION & DOCUMENTATION

2.1 Forensic building investigation

Many different professionals participated in the building investigation and documentation of the Ingatorp barn. The methodology, where craftsmen play a central role, may be depicted as 'forensic'. Martin Weaver has coined the concept 'forensic conservation' to put emphasis on the scientific methods in architectural conservation (Weaver 1995). Weaver associates conservation with a legal process where the practitioners should be able to present any aspect of the work as evidence in a court of law. Scientific methods may be useful to make in-deep analysis and verify evidence, but the overall methodology in a building investigation is a semiotic pragmatism, with the aim to make the best possible inference in account of an observation. The historian Carlo Ginzburg frames the methodology, calling it "a paradigm of clues" (Ginzburg 1999).

In this text forensic building investigation refers to the way in which the physical source material is approached at the location of the building whose historic events the analysis sets out to explore (Almevik 2012, 2014). The research procedure is not strictly inductive or deductively driven by hypothesis but rather abductive, using close up investigation, interpretation of toolmarks and craftsmanship in combination with the horizontal excavations of the building's

historical layers. The question is what traces may be combined and used to draw conclusions about this medieval corner timber building?

2.2 *The craftsman's perception of buildings*

Judging by the outcome of observations, experiences from embracing tools, materials and procedures, the craftsman elucidate aspects of the past that other overlook (Almevik & Melin 2015). The possibility to re-enact past events in the present observers mind through the fragmented remains require experience in the procedures and methods of making (Ingold 2013). Any observer can articulate his or her awareness of a building and communicate it, but there has to be an awareness of the world before it can be made explicit (Gibson 2015).

One example of the valuable contributions by craftsmanship concerns the wooden shingles. The roofer Börje Samuelsson's in-deep analysis of the nail types and nails holes on exterior walls and roof boards have clarified the different generations and structures of shingles that have covered the building. New information was also fetched from traces of procedural fixing of the shingles and shaving of the sides, which does not correspond to contemporary or known historic craft traditions.

2.3 *A diagram of observations*

The barn had no drawings of any kind, and the basic documentation was made by means of manual measure, laser scanning and Structure from Motion. However, many traces and leads are only possible to observe and evaluate during restoration. In the restoration many parts of the building are dismantled and hidden layers are made accessible. To involve the craftsmen in the documentation of these hidden layers is effective. The craftsmen are present, with tools and equipment to dismantle elements and look behind and beneath.

Equipment frequently used by craftsmen in the forensic investigation is the raking light to elicit marks from historic tool and procedures. Continuous photography and observation protocols are important, and the manual measurement for graphical depiction has an irreplaceable function to produce the analytical perspective on cross-sections, creative viewpoints and imaging of the hidden that the visual gaze and scanning of surfaces does not get beyond (O'Keeffe 2007). The manual measurement is also a means in the building investigation; a close up sensory experience to tacitly learn the language of the building (Sjömar 2000, Haedersdal 1999). Erik Hansen states that the measurement is "a diagram of observation" that ought to be done even though drawings are at hand (Hansen 1978). In the process of manual measurement the surveyor has resided every space in the building, touched every door and moulding and sensed the wear and decay. The whole of the building is known as a review of its details.

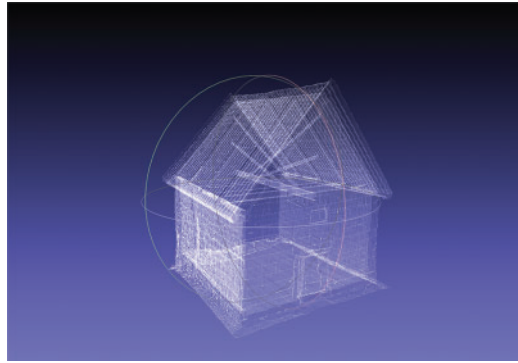


Figure 2. X-ray rendered 3D model, showing at once the exterior and interior structure. By L. Nesi, HumLab, Lund Univ.

2.4 *Documentation of craftsmanship*

Heritage objects constitutes on both tangible and intangible aspects. In line of UNESCO's Convention for the Safeguarding of Intangible Cultural Heritage (2003), the craft tradition is pointed out as a domain of heritage. What does investigation of the intangible cultural heritage of craftsmanship call for documentation?

The experience from this case is that one of the main technologies to document the performance of crafts is the film. During the preparation of materials and restoration the craftsmen have mounted and filmed their own work with their smartphones and Ipads. The film withholds the connection of time and space and captures the generative currents of materials of which the buildings are made. The film does not excessively depend on interpretation at the moment of action. By audio-visual documentation the subjects undertaking the documentation may call our senses to an awareness of what they have seen and heard and noticed in the environment and the spatial-temporal interaction of bodies, tools and materials, without converting the information into a different mode (Gibson 2015).

3 PARTICIPATION

3.1 *Dialogue-seminars*

An initial step in the conservation process was to bring people together from the local community, the building direction as well as regional and national stakeholders. The objective was to create an historical understanding for the building and to activate a sustainable local context for safeguarding.

The congregation arranged several dialogue seminars with support by the regional museum, the diocese and the National Craft laboratory. Various themes were introduced, such as the medieval society and sacral building traditions in this region, history and theory in conservation and craftsmanship. Furthermore, the diagnosis of the building structure and decisions about information management, the future use of the

building and principles for the restoration actions were discussed during these seminars.

3.2 *Enhanced craftsmanship and local material*

The stand to enhance craftsmanship was a decision of the church commission, the diocese and building team. The ICOMOS Principles for preservation of historic timber structures (ICOMOS 1999) was discussed and became influential in the aims to use craftsmanship, construction technology and tools that correspond with those used originally (§9). The shingle nails and other secondary materials were to be equivalents of the originals. The material supply for the restoration came from the parish forest, and the new wood was selected of the same species with the same grading and similar natural characteristics as in the parts being replaced.

In light of the UNESCO Convention for the safeguarding of the intangible cultural heritage (2003), the heritage object should be recognized in its full complexity of both intangible and tangible contributing elements. Attending to these guidelines invite us to restore the building structure by means of skilled craftsmanship and simultaneously curate heritage crafts by means of the building restoration.

3.3 *Tradition and correspondence*

The adapted restoration principles and enhancing of craftsmanship raise questions on tradition and correspondence. Present craftsmen do not share an unbroken chain of an 800-year woodworking tradition in connection with this building. The safeguarding effort is not to attend to and rely on present traditions of craftsmanship, but rather to re-enact and re-establish craftsmanship that connects to the medieval woodworking procedures and qualities. The practice of craftsmanship hence becomes a practice of historical inquiry.

To attend to history in the conservation process may also involve the organisation of work. Historic sources inform that parishioners often financed the church building in-kind by supply and preparation of building materials. When the barn turns up in the church archive the first time in 1707, it's by a decree that every farmstead should produce shingles to the church and that these shingles should be stored in the "church-barn" (Gullbrandsson 2010).

3.4 *Co-production, training and learning resources*

In past times it was possible to demand from the peasants to bring shingles and logs to the churchyard. This would save money to the congregation's restoration budget, but today no parishioners have the skills of hewing, cleaving and carving natural wood with axe into these materials.

Producing wooden shingles today is labour intensive and costly. The roofer put forward the suggestion co-produce the shingles together with the parishioners.



Figure 3. Parishioners, local craftsmen and conservation officers participated in the co-production of wooden shingles. Photo. G. Almevik.

To improve their skills and manage the co-production a two-day course was organised by the Craft Laboratory, providing training in the technique along with demonstrations and lectures. A film was produced with instructional content. This open access media has been extensively viewed and also used as learning resource in formal craft education (<http://gup.uu.se/publication/214744-spankurs>).

The interest for this course was great and a second course was arranged. The participants were parishioners but the majority were craftsmen from the district who wanted to learn this technique. Conservation officers and representatives from the diocese also participated. An officer from the regional museum claimed: "By participating and standing here by the churchyard producing shingles I get a whole new perspective to appraise and value this historic material and medieval craft" (Ibid.).

4 RESTORATION

4.1 *Diagnosis, interventions and considerations*

The investigation observed problems with deformations on wallplates and rafters and extensive decay on the front sill. Some of the problems were caused or increased by recent interventions. Firstly, roof tiles that had been put on top of a previous wooden roof in the early 20th century were too heavy for the original light-weight roof structure. Secondly, the front sill had severe damages caused by water and damp. Finally, the shingles covering the walls are about 450 years old and naturally eroded and some to a material finitude.

The decisions in regard of these problems were, firstly to remove the tile roof and to selectively restore the existing wooden shingle roof and wall covering. To keep the recent tile layer would require a secondary supportive structure besides repair of the damaged wall plate and rafters. Considering the very old and patinated wall shingles, we decided to assess the status of each one of the materials; if it could be preserved and still function as a cover to the main structure.



Figure 4. Surgical repair of the damaged front sill. Photo. K.M. Melin.

In the process of dismantling the shingles, carefully one by one, the roofer noticed how the precursors had done repairing shingles by inserting shorter shingles under the worn out ones. The result was well performed and hardly noticeable. This historic procedure of repair was picked up and gave a result where very few original shingles had to be rejected.

The repair of the rafters, roof plate and sill was object to surgical woodwork aiming at re-establishing the structural functions of the elements but to preserve the most possible of the material. Elaborated joinery was required to save the original surfaces and the integrity of the perception of this highly unique space.

5 CRAFTING AUTHENTICITY

5.1 Reconstructive restoration

The stand to use craftsmanship, construction technology and tools that correspond or connect with those used original calls for a deeper analysis in regard of conservation theory. Heritage conservation has an ambiguous attitude towards reconstructions. The Venice charter's refuting of any reconstruction action has been and still is a cornerstone in Swedish restoration discourse. Contemporary intervention and new material is commonly imposed to be distinguishable in this ontology of contrast. The historical monument is commonly perceived as a stable object and a true testimony of the past whose authenticity has indisputable intrinsic value (Bedeire 2013).

Contemporary conservation theory puts the concept of authenticity under cultural contingency, and refutes the notion of reversibility (Muñoz Viñas 2005). Returning something to a previous condition is a creative practice transforming the existing into something new, hence restoration is always anachronistic. Restoration is defined by the methodological moment to recognize the heritage object "in its physical consistency and in its twofold aesthetic and historical polarity, in view of its transmission to the future" (Jokilehto 2012). The specific track of methodology in the case of Ingatorp may be defined as a reconstructive restoration that aims to balance the connectiveness

of the objects materials and procedures to both the situated community and the historic structure and past events.

5.2 Menard's method

Robin George Collingwood defines historical knowledge as "the re-enactment of a past thought encapsulated in a context of present thoughts" (Collingwood 2002). The method of restoration and approach in re-enacting this 800 year old craft could be further depicted through José Luis Borges novel "Pierre Menard, author of the Quixote", as "the technique of deliberate anachronism" (Borges 1962). Borges tells us about the genius writer Menard who had resolved to write Cervantes Don Quixote, "not to copy the story down as it exists in the version by Miguel de Cervantes, but to arrive at the conditions necessary to write exactly the *same* story through his own experiences".

Menard's method is relatively simple "Learn Spanish, return to Catholicism, fight against the Moor or Turk, forget the history of Europe from 1602 to 1918 – *be* Miguel de Cervantes". The reference to Pierre Menard's method may seem out of scope, but it pinpoints the ambivalence of reconstruction and in this case reconstructive restoration. What does it mean and implicate to use craftsmanship that corresponds to a crafted heritage object? How is the authenticity crafted?

It is common in building conservation in Sweden, that traditional craftsmanship is reduced to handmade manual procedures. However, traditions change, break and fusion. In this case, as previously stated, present craftsmen do not share an unbroken chain of tradition connecting to the heritage object. Menard's method applied in the heritage craft for restoration of historic buildings may implicate: contesting the masters, leaving the guilds maxims and rules of thumb, forget the pedagogical sloid - deconstruct the tacit framework for ones moral acts and judgements.

5.3 Oscillation

The results from the investigations are the starting point for the re-enactment of the craft procedures. The results from the re-enactments let the craftsmen evaluate the abductive theories made during investigations. This interplay between investigation and reconstructive restoration is the key element in the production of historical craft knowledge. Furthermore, a wider context offers opportunities to oscillate, test and contest experience from other projects. The most beneficial project in this case has been the reconstruction of the medieval church in Södra Råda.

Among other procedures, historic production of roofboards has been investigated in Södra Råda. By evidence of historic traces and successful results from practicing the methods, the craftsmen in this project succeeded to make four long boards of each log contrary previous interpretations and tests that it only was possible to make two (Almevik & Melin 2015).



Figure 5. Production of roof boards. K.M. Melin.

However, the pines in Ingatorp had big twig humps that made it impossible to make more than two boards. But the traces from this procedure resembled the original roofboards on the tithe barn. In the fibres and tool marks we may read that the precursors in Ingatorp 800 years ago had the same problems with twig humps as the present craftsmen.

5.4 *Situated environment and object affordances*

The practice of craftsmanship in this reconstructive restoration becomes a practice of historical inquiry.

In re-enacting some of the building procedures of this heritage object, the craftsman has to undertake the researchers critical mind, thus as researcher use the craftsman's abilities to connect with the situated environment and perceive and scrutinize the invariants in the flowing stimulus array of embodied actions.

John Gibson's theory of environmental dynamics and concept object affordances may elicit the craftsman's particular contribution to historic inquiry. Firstly, perceiving precedes predicting. There has to be an awareness of the world before it can be put into words, and the embodied action creates an awareness providing other kinds of affordances. The noun affordance pertains to the environment providing the opportunity for action. Affordances require a relationship to the situated environment from where the contingencies of actions derive. According to Gibson's theory, when we perceive an object we observe the object's affordances and not its particular qualities.

The craftsmen's great challenge is to keep at the same time a retrospective and prospective sense of occurrence, and to make use of the oscillation between inferential logic thinking and an embodied creative flow. Every craftsman is connected to a tacit framework for ones moral acts and judgements. The logic

of craftsman's skills is interwoven with moral perceptions and social norms surrounding an occupational identity. But being is, referring to Ulrich Gumbrecht, "not supposed to be something general or something metahistorical 'below' or 'behind' a world of surfaces". "Something that is present is supposed to be tangible for human hands, which implies that, conversely, it can have an immediate impact on human bodies" (Gumbrecht 2004).

The procedure of reconstructive restoration may create a tension between the observation of the medieval buildings and the perception of affordances in the reconstructive making. By embracing tools, materials and procedures, the craftsman may elucidate aspects of the past that have been overlooked by earlier academic research, or even contest previous interpretations (Almevik 2012, Almevik & Melin 2015). However, the methodology involves a refined epistemological self-awareness.

6 CRAFT AND CONSERVATION

6.1 *Heritage crafts in the 21th century*

In retrospective, craftsmanship has been evaluated differently in the history of conservation. A very general reflection on the situation in Sweden is that skilled craftsmen have been taken for granted until just recently, when heritage conservation authorities and property owners have experienced increasing difficulties to find specific services of craftsmanship on the market (Almevik 2014).

A weak and fluid market for specialised crafts combined with enforced legal procedures for procurement and construction have favoured large companies with general construction skills supported by marketing and administrative units. The expectation for craftsmanship have diffused into construction work as a mere means to produce; a reluctant workforce that needs to be instructed by heritage experts and guided in the art of restoration by thoroughgoing construction plans and drawings.

A recent phenomenon is that crafts with enduring traditions actively seek up the field of heritage conservation and embrace the identity of intangible cultural heritage or brand of traditional craft (Wolke 2014). Heritage craft is a concept that has emerged in a wider context, indicating that heritage conservation is beginning to assimilate the group of skilled craft practitioners. The word is used among others by the British National Skills Academy as a frame and starting point for mapping the economic contribution of crafts that operate in a context of heritage, where craft make use of the past in the present (Jennings 2012).

6.2 *Embracing the workmanship of risk*

Claiming the idea of a top down system to control the many judgements in a restoration erodes the legitimacy of heritage conservation. Craftsmanship has been defined by David Pye as a workmanship of risk,

“in which the quality of the result is not predetermined, but depends upon the judgements, dexterity and care which the maker exercises as he works” (Pye 2008). It cannot be standardised without transforming into a practice foreign or even contra productive to local heritage values. “The workmanship of risk has no exclusive prerogative of quality. What it has exclusively is an immensely range of qualities, without which at its command the art of design becomes arid and impoverished” (ibidem).

Contracts to maintain and restore historic buildings and environments are essential for economic sustainability thus for knowledge transmitting within small craft-based companies. Heritage conservation has a great responsibility for the future of heritage crafts, and whether to entrench a scope of competence or to enhance craftsmanship and invite for coequal participation.

6.3 *From authenticity to connectivity*

The conference resulting in The Nara Document on Authenticity has been described as “a watershed moment” in modern conservation history (Stovel 2008). In light of succeeding events the document marks a transition from a material based conservation to a value based or community based conservation practice (Sully 2015). Craftsmanship has been enhanced but mainly as an element of intangible heritage or in maker communities owning a sense of common heritage. In this case the enhancing of craftsmanship is pointing to another relation where heritage craft is considered a constituent part of heritage conservation. We doubt that heritage conservation will be able to endure defending the cult of authenticity. Instead of placing craftsmanship in the Nara grid of authenticity by its social, artistic, dimensions to heritage, the heritage craft could be genuinely connected to the heritage communities, projects and teams of professionals.

6.4 *Enhancing craftsmanship*

There is an old saying, “Let not the cobbler go beyond his last”, meaning that craftsmen should stay within their scope of competence. The decision-making in conservation has been and still is considered an expert skill that belongs to traditional academic professions. This case has elicited how the craftsmen’s perception contribute to the forensic building investigation to outline of a buildings history and to obtain a thorough understanding of the structural behaviour of the built cultural heritage. The conclusion underpinned by theoretical inquiry and experimentation in this case is that it is possible to enhance craft practice in all steps of the conservation process, and that doing so is productive in regard of aesthetic, historic, scientific and social heritage values.

The feasibility of this seemingly time and cost intensive approach in common practice may be contested. The ways of working with the local community

and how to make use of their capabilities and local resources has to be co-designed in each context. However, the aim for this approach is to contest what is common practice. As Randall Mason states:

“Rhetorically, we all agree on the call for more participation . . . But it will take real changes in professional attitudes as well as continual testing of new, context-appropriate methods” (Mason 2008:13).

The endeavour towards a people based conservation approach presented in this article requires a shift of mind. Heritage conservation could enlarge its relevance by developing participatory methods to support craftsmen and maker communities in a cooperative investigation of craft-related problems, creation of learning resources and the transmission of craft knowledge.

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