



KEYWORDS: Craft research, craft sciences, practice-led research, practitioner-researcher.

CITE: Almevik, Gunnar, Camilla Groth, and Tina Westerlund. 2022. Explorations in the Craft Sciences. *Craft Sciences*, edited by Tina Westerlund, Camilla Groth and Gunnar Almevik. Gothenburg Studies in Conservation. Gothenburg: Acta Universitatis Gothoburgensis, 2–18.

**Gunnar Almevik** is a building conservator and professor in conservation at the University of Gothenburg. His research Cross the fields of cultural heritage, material culture and making, with a keen interest in methodology. He led vocational craft careers for carpenters, maions and gardeners into higher education in Sweden, and established the Crafts Laboratory to bridge research and practice. Much of his research is conducted in multi- and transdisciplinary collaboration and in real settings where practice is integrated in the research.

**Camilla Groth** is a practitioner-researcher and teacher with a traditional training in ceramic crafts. Her main research interests lie in haptic experiences and experiential knowing in creative practices, with a focus on material engagement and embodiment. She holds an Associate professor position in arts, design, and crafts at the Department of Visual and Performing Arts Education, University of South-Eastern Norway where she is leading the Embodied Making and Learning (EMAL) research group.

**Tina Westerlund** is a gardener and senior lecturer at the Department of Conservation, University of Gothenburg, Sweden. In her research, she focuses on communication of craft knowledge. She has specialised on this in relation to plant propagation practice, a knowledge needed both in garden management and in the preservation of plants of special interest. As a director of the Craft Laboratory, a national centre for craft in conservation, she works to build bridges between academia and cultural heritage institutions to support the development of knowledge exchange in the practice of crafts.

# Explorations in Craft Sciences

*By Gunnar Almevik, Camilla Groth and Tina Westerlund*

## INTRODUCTION

The field of ‘Craft Sciences’ refers to research conducted across and within different craft subjects and academic contexts. This book aims to build on the breadth of topics, source material, methods, perspectives, and results that reside in this field, and to explore what unites the research in such diverse contexts as, for example, the arts, conservation, or vocational craft education. The common thread between each of the chapters in the book is the augmented attention given to methods—the craft research methods—and to the relationship between the field of inquiry and the field of practice. A common feature is that practice plays an instrumental role in the research found within the chapters, and that the researchers in this publication are also practitioners. The authors are researchers but they are also potters, waiters, carpenters,

gardeners, textile artists, boat builders, smiths, building conservators, painting restorers, furniture designers, illustrators, and media designers. They are in different career stages and have varied contextual backgrounds, but all have an academic education and are either doctoral candidates, Post doc researchers, university lecturers, or professors in their own field. The authors are mainly situated in a Scandinavian context and draw on very different research traditions such as the arts, educational and cultural sciences, meal sciences, and conservation, and from particular craft subjects, like boatbuilding, gardening, and weaving. With this we are aiming to broaden the field of educational craft sciences to include skilled manual work in materials also outside the definition of arts and crafts, but still not venturing into sports, music, or the medical context such as dentistry or surgery. While con-

tributors in this anthology speak with voices that reflect their disciplinary diversity, we do not aim at defining or differentiating between arts, crafts, or design as we find these categories unhelpful, but rather think that these creative practices have more in common than what separates them.

Today there are several fields of study at universities in the Nordic countries which are strongly anchored in craft practice. Many of these traditional craft fields are housed in different disciplines or faculties and are hybridised within other academic subjects. We may, for example, find building crafts together with gardening and horticulture in the faculty of science; carpentry and upholstery in the faculty of technology; culinary crafts in the faculty of humanities and social sciences; craft education (*sloyd*) in the faculty of pedagogy; and most of the studio crafts, like jewellery, pottery, textile, forging, and cabinet making, in the art faculties. There are interesting combinations and hybrids with, for instance, heritage conservation, sensory studies, and design, but the craft elements of these areas of study are often in a comparatively weak position as they are subordinated to traditional academic disciplines and, in many cases, lack their own craft-focused research. Furthermore, a common feature in the Nordic countries is the strong divide between arts and sciences, which hustles the crafts—often considered peculiar to both artistic and scientific standards—to the margins. As an academic field, craft is entrapped both in old ontologies of what craft is, or is not, considered to be and the norms of established disciplines and subjects. There is a need for a dialogue and exchange over and beyond the borders of universities, faculties, and disciplines to consolidate a common platform for the Craft Sciences.

## WHY DO WE CALL IT THE ‘CRAFT SCIENCES’?

The word composition of ‘craft’ and ‘science’ may be perceived as an additive of crafts and traditional natural science, or a craft practice undertaken only as deductive hypothesis-driven research—but this is not the case. Craft Science had already been established as a field of study in the early 1990s by craft teacher educators in Finland in which the craft research was conducted in close relation to behavioural and educational sciences (Kokko et al. 2020). In this anthology we build on this tradition, relating to rigorous research conducted in craft practices of different kinds. The title of the anthology, *Craft Sciences*, is also connected to a translation from the established Nordic concept ‘*hantverksvetenskap*’—which in English could also mean craft-knowledge. However, in Swedish, the word *vetenskap* stands for both knowledge and science. In the Nordic languages in general, as also in German, *science* refers to the wider concept ‘*vetenskap*’ or ‘*wissenschaft*’, which does not have an exact translation in English. *Vetenskap* includes subjects within the humanities and social sciences such as the arts, music, sports, literature, anthropology, or history. The meaning of the word *Vetenskap* emphasises the rigour of an inquiry, scholarly attitude, and research expertise in any academic subject and by any approved method. In translation, we use the word *sciences* (in the plural) to point at the variety of possible research fields and subjects included. The combination of the words in an English publication, knowing the interpretation that readers do of the word *science*, is perhaps also a deliberate provocation to encourage the reader to think about craft in a way that may contradict habitual perceptions such as a hierarchical division

between theory and practice. Additionally, when we speak about practitioners in this context, rather than using the word *craftsman*, we use the gender-neutral pronoun *craftspeople* to refer to makers in general, and *practitioner* and/or *researcher* to specify the different roles that the craftsperson may have. There exists a wide range of terminology associated with craft research, like practice-led research, practice research, and practitioner research, or cognitive associations like experiential knowledge, embodied knowledge, or knowledge in action. In this introduction we hope to disclose the origin or context of some of these concepts.

#### SHIFTING THE MEANING OF CRAFT

The Swedish word for *craft* is '*hantverk*', deriving from the stem 'hand' of the body, hence the word's strong association with manual work and handicrafts. This etymology is common throughout the Nordic languages, where craft is translated '*håndverk*' in Norwegian, '*håndværk*' in Danish, '*handverk*' in Icelandic, and '*käsityö*' (handwork) in Finnish, all with reference to manual work. In the longstanding discourse of the dualism of body and mind, craft was perceived as an opposite to scholarly work (Dormer 1997). Up until 2009, the official dictionary of Swedish language defined the word as "designation of certain kinds of work performed with the hands [...] to which (larger) technical skills are required, but in general little theoretical education" (SAOB). The perception of the activity has become an amalgam of the linguistic designation and entrapped in dichotomic formations, like theory and practice, intellectual and manual, official and worker, academic and vocational. When, in the late 1990s, five acknowledged craft schools in Sweden applied to the Higher Education Authority for the authority to be able to award academic qua-

lifications, the ambition proved to be impossible (HSV 1997). Craft as a subject was not considered eligible for higher education at that time. Today, three of these craft schools are accredited institutions of higher education, but it remains the case that none has well-developed research as yet. This situation lies behind another motive in the creation of this anthology; namely, to encourage the establishing of craft education in the higher education sector and to inspire research activities in these institutions.

In a rather short period of time, the perception of craft and its cognitive boundaries has changed. The recent transformation is driven by various and mutually corroborative processes. Academic society has, in general, become more reflexive and critical towards unarticulated and biased ontological premises for scholarly work. For instance, there is now more awareness and understanding of how socially constructed notions of gender, race, and class may hinder or further ideas, careers, or positions over, say, merit and coherent reasoning. Furthermore, academic research in neuroscience, psychology, pedagogy, and anthropology has provided arguments for, and evidence of embodied cognition and the benefits of, incorporating experiential knowledge into research, too.

Cognitive science has during the last two decades shown that thinking is a fundamentally situated and contextually embedded activity that is dependent on a persons' active engagement with the environment through social and material interactions. This situated or embodied cognition is exemplified through the four E's: Cognition is Embodied, meaning that cognition involves the whole body, as when we make sense of a material through manipulation, for example. Further, cognition is Embedded, meaning it is embedded within struc-

tures in the social and material surrounding, such as in the craft studio or community of practice. Cognition is Extended, meaning that thinking is extended beyond the body of a person or organism, such as in tool use. It is also Enacted, meaning that what goes on in our minds shows in our actions, for example in skilled craft practice (Marchand 2012; Malafouris 2013; Newen, Gallagher and de Bruin 2018). These perspectives on cognition as dependent on action and thus also involving the body and sensory experiences, such as in skilled manual work, now have the potential to balance out hierarchies between theoretical and practical aspects of both work and education.

The shifting attitudes towards craft may also be related to the institutional change in European universities initiated by the Bologna agreement (for an overview, see Solberg 2017), to provide a general framework for qualifications and development of careers from undergraduate level to doctoral level. During the last two decades, Swedish universities have incorporated traditional vocations, like chefs and gardeners, into higher education, in which the students may proceed from bachelor through masters and doctoral education (Almevik 2019; Kokko et al. 2020). This process of academisation has many tangents and is not exclusive to the university. The virtues of scholarly work, with source criticism, evidence-based reasoning, and analytical and explorative methods, have influenced the whole education sector, right down to preschool. It has become more widely known that most careers and even traditional manual vocations require analytical skills, reflection, methods for documentation and assessment, and so forth. Today, the official dictionary for the Swedish language has changed the explanation of craft, now emphasising it as a “working method in production where the work is

carried out on a small scale with technically simple aids and requires good professional skills [...] also about intellectual work by accepted methods (which can be learned)” (SAOB).

## CRAFT RESEARCH

Theory of craft has been developed vigorously in the Anglo-American arts and crafts tradition (Pye 1995; McCullough 1996; Risatti 2009). There is also a vibrant research scene where crafts have been studied from a social science and art history perspective as well as from a philosophical perspective (Rolf 1991; Molander 1996; Dormer 1997; Adamson 2007; Risatti 2009; Sennett 2009; Marchand 2016; Kuijpers 2018). Craft is commonly defined as a vocational field, and craft theorists have been occupied with essence, meaning, definition, and history of craft, or traditional forms of knowledge transfer and skill acquisition. What is often missing is an understanding of craft as a field of inquiry and a research practice in its own right. So too is the voice and perspective of the practitioner that does not have presence when the crafts person is the object of research.

One solution to this research gap has been for scholars of anthropology, history, or social science to spend years in a craft community, learning the trade through apprenticeship (Coy 1989) and thus being able to give an insider’s account of how, for example, knowledge is passed down from master to apprentices and how interpersonal relationships evolve over time in a crafts community (Gowlland 2015; Marchand 2016; Smith 2016). As Marchand (2015) concludes in his article for the *Journal of Visual Anthropology*: “In order to optimize the ‘productive’ potential of such exchanges, the shift from ‘studies of’ ethnographic subjects toward collaborative ‘studies with’ communities of practice

will become increasingly necessary” (2015, 321). Here, Marchand also acknowledges the benefits of audio-visual means to get even closer to the details of craftwork, including the voices of the craftspeople (ibid, 309). Gowlland, who has studied ceramic practices and practitioners in China (2015, 295), writes: “Apprenticeship as method represents a unique way of providing a first-hand account of experiences of work. One must of course be cautious about assuming that one’s experiences of learning the craft are the same as one’s informants.” As seen in this quote, Gowlland points to the fact that the perspective of the ethnographer studying crafts through apprenticeship is still a different one from craft practitioners studying their own craft. In the process further on from there, the researcher’s perspective has the potential to shift also from the “studies with” craftspeople to an “insider” perspective of craft knowledge through autoethnographic study of, for example, own skill acquisition (cf. O’Connor 2005; 2017).

In this anthology we have summoned research in which the craftspeople are not a mere informant, but author and researcher, thus giving the craftspeople a voice and simultaneously letting this voice be heard in the academic arena. Instead of having a mainly sociological or anthropological perspective, they have a longitudinal insider’s perspective on their own processes with materials and creative practice. Some of them also have academic knowledge in conservation or archaeology, but have gained this additional perspective after acquiring craft skills and related knowledge. Practitioners with this type of overlapping knowledge may also be called T-shaped practitioners, as they are able to apply their deep domain specific knowledge in a broader interdisciplinary context (Barile et al. 2012). While being able to use craft processes as research in-

quiries per se, they also have the academic skills of drawing general conclusions of the results of their organised inquiry, for the benefit of the craft community and beyond.

Philosopher and craft theorist Bengt Molander has contributed to research strategies in this field, and he stresses the importance of craft research being functional to practice:

Theories in craft reality must be practice-oriented—that is, they must be formulated in such a way that, as theories (principles, procedural descriptions, etc.), they can be understood and put to use in reality by skilled craftspeople.<sup>1</sup> This means theory that is able to help establish and maintain robust connections between craftspeople and what they work with and on, possibly in a multi-disciplinary setting. [...] Such theories must also function as orientation systems and thus be subject-oriented. An important part of the development of knowledge within the framework of craft science is also separating the purely subjective from that which is tenable and informative for everyone with (adequate) craft proficiency. (Molander in this anthology, and in original language Molander 2017, 30–31)

## RESEARCH THROUGH PRACTICE

At present, there is a growing community of craft researchers who have embarked on practice-led research using research methods conducted *through* practice, developing knowledge from within the practice, exploring systematic ways to learn from practice, and aiming to bring back new content knowledge and functional approaches to improve their own fields and subjects. These practitioner-researchers study their craft for the purpose of learning more about their crafts but also to better be able to document it and to articulate it for others and to share their knowledge with the practice field

and related education. Compared to a professional practitioner in production, who may not have the capability or competence to advance knowledge beyond personal enlightenment or improvement of the particular activity at hand, the added research training gives the practitioner-researcher skills and intrinsic motivations to pursue organised inquiry and to analyse the activity for the purposes of theory building, methodological development, and communication of the results to different audiences.

The contributions in the present anthology derive from a rather large range of contexts, disciplines, and subject matter, all with a different understanding of how to do and disseminate research that is formed in these separate fields. The one aspect that brings these authors together, and which led to them being invited to contribute to this book, is that they reflect on their own knowledge of a crafts-based practice and use this to their advantage in their research practice. We call them practitioner-researchers, and in the following we will briefly show some of the grayscale points of departure for this kind of research in the creative practices.

Research through practice has gained traction especially in the art-based disciplines because inquiries through material manipulation and thinking through materials are paramount (Rust et al. 2007; Nimkulrat 2012). When it comes to the choices of methodology for research activities and their dissemination, the culture in this field is struggling to find a modality that is best suited to the nature of the practice while gaining credibility and respect in the academic context (Niedderer and Reilly 2010). Being a young field, research through the creative practices is still developing its traditions (Mäkelä and Nimkulrat 2018; Varto 2018) and the field is too dispersed to have settled on some agreement on how to conduct research through practice (Candy

and Edmonds 2018). However, the reluctance of conforming to expectations keeps the field developing and the discourse on methods, motives, topics and forms of dissemination is a healthy influence on any research paradigm (cf. Borgdorff 2012; Sjömar 2017; Borgdorff et al. 2020). A phenomenological line of inquiry, through hermeneutical reflection between theory and practice, utilising self-study and autoethnographic data collection methods is common (Ehn 2011; Almevik, Jarefjäll and Samuelsson 2013; Ehn 2014; Jarefjäll 2016; Mäkelä and Nimkulrat 2018) and the research evolves through an explorative and reflective process in which the practice leads the way (Daichendt 2012; Candy and Edmonds 2018). Practice-led research is sometimes divided into a focus either on the conceptual process that is materialised in the artefact and, on the other hand, the study of practice through and for practice itself (Candy 2006; Wilson and van Ruiten 2013; or, for a more varied interpretation, Schwab and Borgdorff 2014).

Some of the authors in this anthology have used craft as a platform for artistic explorations into societal issues or values. They have expressed themselves in an alternative mode to academic writing, utilising an essayistic style. When getting insight into the creative practitioner's mind and life-world, the circumstances, values, pre-assumptions, and emotions governing the situations described, give insight into the different issues that affect the practitioner's decision making and motives. The academic article format of presenting methods and results is not as effective as the essay and reflective narrative in this context (Varto 2018, 60–61). Craft descriptions through case studies including self-reflection, work stories, production novellas, narrative life writing, or even fictitious storytelling can give precious insights and new perspectives



for looking at the world and our society with new eyes (Livholts and Tamboukou 2015, 32–34; Varto 2018, 70–71).

Practice research as a sociological or anthropological study, connecting to material culture and heritage studies (Glassie 1999; Prown 2001; Planke 2001; Pink 2009) or practice theory (Lave and Wenger 1991; Nicolini, Gherardi and Yanow 2003; Strati 2003; 2007; Gunnarsson 2019), have tended to be a separate line of inquiry, but with much in common with creative research through practice. In practice research, the researcher is seeking to place the practice in a wider context including social patterns and interactions between the practitioner and others, material mediation and material culture (Gherardi 2000), as well as describing practitioners as members of communities of practices (Lave and Wenger 1991). The main focus lies in describing practice as situated, materially and socially mediated, and to study how practice-based knowledge is accumulating or transferred between individuals rather than explicating own practice-related knowing (Nicolini, Gherardi and Yanow 2003). The potential of the craft practitioner in this context is the deep understanding of the contexts studied and the empathic ability of placing oneself in the role of another craft practitioner, whether the act of crafting has happened in this lifetime or in a previous era. In research on skill and craft knowledge, the practitioner of a craft has code competence and embodied knowledge of the underlying circumstances for the successful or unsuccessful completion of a craft-related task and can thus inform historical research in craft from an insider's position. Combined with an academic education, and, as some of the authors of this anthology also have an additional education in conservation or archaeology, they are able to make sound

and justified interpretations of crafted objects, tools, or descriptions of craft procedures from a time that has passed. The underlying assumption is that the informed practitioner is the best person to analyse the practice under investigation, as an outsider would not have the ability to detect patterns of importance to that practice or related processes.

The cases presented in this anthology are diverse but take a similar approach in the way they involve the craft practice and practitioners in the research, as these practitioner-researchers are connoisseurs in their particular fields. Examples are given to coherent research approaches in historical studies and contemporary studies, as well as creative research designs for the future. These involve methods for observation, participant observation, and self-observation. Many times, the researchers alternate between participating in and observing the practice in a process of zooming in and zooming out (Nicolini 2009). A particular methodological challenge that recurs in all of these cases is the critical position of being both a research subject and a practitioner or connoisseur in the field defined as the object of research.

The field of practice-led research has suffered from low credibility in some areas of research (Niedderer and Reilly 2010; Campbell 2013) due to the difficulty in employing so-called rigorous research methods. Self-study oriented research projects are easily criticised for a lack of objectivity and poor credibility as the researcher is analysing data that is produced by the researchers' practice—i.e., the data could be manipulated to show desired results. It has been suggested that the data should be co-analysed together with a second researcher to add a more distant view on the subject under study (Geiger, Muir and Lamb 2016). In research on experiential knowledge of a speci-



fic type of practice, it may be challenging to find another researcher with the same understanding of that practice, in particular when the research concerns an unusual craft practice. Consequently, we here argue for subjectivity and intersubjectivity as vital concepts in the analogy at hand, as an insider's perspective is not possible through objective and distant approaches. However, some of the methods employed by researchers in this book are adapted from more rigorous research settings in other fields in an attempt to make the processes more organised and transparent.

#### NORDIC CRAFT RESEARCH IN DIFFERENT ACADEMIC TRADITIONS

In Sweden and neighbouring Nordic countries, craft research has long-standing but various academic traditions that stem from different roots. Craft has been a frequent object of research in the cultural sciences, from empirical folklore studies in the early 1900s to contemporary critical heritage studies. Within the humanities, it is common that an academic study of an art or craft is separated from the practice and delimits to theoretical, historical, and critical approaches. In addition, architecture and engineering have investigated crafts in subordinated fields, like historic preservation, building conservation, and the history of architecture and engineering. In all of these fields, the craft has mainly been an *object* of study and the craftspeople, if acknowledged, have been approached as oral sources.

Another direction of research involves the practices. In medicine, for instance, the traditional craft of surgery has been incorporated and developed within the discipline of medicine. A radical event in the modern history of the higher education sector was the establishment of science in nursing

and physiotherapy in the 1980s, which initiated an active search for theories and methods for research in professional practices (Josefson 1988). In these practice fields the material context is not in the centre; instead, the craft of dealing with personal relationships and human situations form the context of research. Here, grounded theory and action research became dominant approaches and with emphasis on reflexivity and dialogue to manage subjectivity and rigour in qualitative research. Theories were frequently borrowed from philosophy with particular interest in the pragmatist tradition (e.g. Dewey [1934] 2005; Schön 1983). The Swedish Institute for Work Life played a main role, accompanied by influencers like Bernt Gustavsson (1991; 2004), Bo Göransson (1990), Ingela Josefson (1988; 1991), Bengt Molander (1996), and Bertil Rolf (1991). These references are still active and Ingela Josefson's concept of *förtrogenhet* (familiarity or connoisseurship) and Bengt Molander's outline of *knowing in action* have become elements of a general epistemology for practice-led research. The legacy is also present in research and education at the Centre for Studies in Practical Knowledge at Södertörn University and a corresponding centre at Nord University in Bodö evolving out of different forms of practical knowledge particularly in working life.

Characteristic for the Nordic countries is the early established craft (*sloyd*) teacher's education (education for teachers of craft in the K-12 primary school sector) and the emerging craft research in relation to craft teacher education in this context. The vocational sloyd seminars were integrated into higher education in the early 1970s and provided doctoral careers from the 1990s. About twenty dissertations have been presented in Sweden centring around conversation analysis and ethnomethodological approaches to acquisition and transfer of craft

skills (e.g., Johansson 2002; Hasselskog 2010). In Sweden, *slöjdvvetenskap* or ‘science in sloyd’ was formalised through Marlène Johansson’s professor chair in 2014 at the University of Gothenburg. In Finland, *käsityötiede* or ‘craft science’ had already been established at Helsinki University in textile studies in 1992, and is now the formal discipline at all departments of sloyd teacher’s education. Pirita Seitamaa-Hakkarainen is one strong predecessor who has long encouraged rigorous craft research, basing much theory in design cognition and behavioural studies (cf. Seitamaa-Hakkarainen and Hakkarainen, 2001; Seitamaa-Hakkarainen et al., 2016). Many Nordic craft teachers and sloyd researchers are affiliated with the NordFo organisation (*Nordiskt forum för forskning och utvecklingsarbete inom utbildning i slöjd*) which provides recurrent conferences and which also stands behind *Techne Journal*, based in Finland. The sloyd and craft teachers’ research, as well as art and design research, is also visible in the Norwegian *FormAkademisk Journal*.

The art schools in Sweden were provided with doctoral programs in the early 2000s, as initiated by the Bologna process. The first doctorates defended their dissertations in 2006, and the first dissertation dedicated solely to craft as a subject in its own right was defended within an art faculty at the University of Gothenburg in 2016 by ceramic artist and researcher Mårten Medbo (2016). Aalto University in Helsinki has a longer history of guiding doctoral research in the fields of art, craft and design, now with over 100 graduates since the early 1990s. Many of these employ practice-led research methods, some of which have been developed by the school’s pioneer in artistic research practices, ceramic artist and researcher Maarit Mäkelä (see, for example, Mäkelä and Routarinne 2006). The

*Embodied Making and Learning Research Group* (EMAL) at the University of Southeast Norway is made up of 35 researchers, organised in clusters dealing with different aspects of crafts research. The institution represents the largest collective of craft researchers in Norway and their research activities in arts and crafts education span over decades and form some of the basis for evidence-based education in Norway. Despite these thorough achievements and strong Nordic research environments, researchers who do not write in the English language easily fall under the radar of the international craft research audience. By writing a Nordic craft research anthology in the English language, we build on this tradition and point to some of the similar work that takes place in this Nordic region.

## CRAFT AND CONSERVATION

The origin of this anthology stems from yet another root, involving crafts in conservation. Conservation is a poor translation from the Swedish denomination for the academic subject *Kulturvård*, that would be, word by word, *culture + care*. To care for culture. *Kulturvård* is established at two Swedish universities in Uppsala and Gothenburg, involving research, higher education, and professional development, where Craft Science constitutes one dominant field alongside integrated conservation of built environments and the more heritage science profiled conservation of cultural property. All these fields overlap in the applications of the Craft Laboratory in Mariestad, with research and curricula in building crafts, gardening or horticultural crafts, and landscape preservation. Craft research in conservation employs a variety of theories and methods that deal with different temporalities, from the study of history and the examination of present materials and practices to the forecast, design, or

making of heritage futures. Conservation is trans-disciplinary and familiar to multi methodological approaches, bridging research perspectives between natural, cultural, and social sciences (see, e.g., Jare-fjäll 2016; Westerlund 2017; Seiler 2018; Eriksson 2019; Källbom, Nilsen and Örström 2019).

*Kulturvård* is a small and uncommon academic subject but with a great mission. In practice, *kulturvård* is commonly associated with the category we name cultural heritage. Heritage is a category of phenomena that are made and used in society, and, as such, are often defined as valuable, unique, fragile, and worthy of safeguarding. Research shows that the heritagisation processes may strengthen communities and groups in taking ownership and finding strategies to safeguard their heritage (Smith and Akagawa 2009; Niedderer and Townsend 2015; Almevik 2016; Almevik and Melin 2016), but also the fact that authoritative and dissonant heritage discourses of nationality and sovereignty, for instance, are used to oppress communities and groups (Smith 2006; Holtorft and Troels Myrup 2015; Hafstein 2018). However, *kulturvård* is not just about heritage. The subject comprises knowledge and skills focused on the challenges of bringing resources from the past—tangible and intangible—into present and future sustainable use (Almevik and Gustafsson 2021). It has been referred to as a management of change, or a problem-oriented activity devoted to preserving natural, cultural, and social resources in a process of change. It's an academic subject about traditional knowledge and circular economy, about mending, repair, and maintenance, based on deep material knowledge, cultural understanding, and crafts. In this regard, this anthology touches the core of *kulturvård*.

## THEMES PRESENTED IN THE ANTHOLOGY

The book is structured using seven themes that group the chapters according to different approaches of craft research. The theme *Multimodal Communication* highlights some issues posed by the expected format of the academic output—that is, the usual article templates. In the chapter “Rethinking the Academic Artefacts,” Gunnar Almevik and Jonathan Westin review and analyse examples of multimodality in practice-led research outputs with the objective of pointing out and discussing the strengths and weaknesses of different media and formats of dissemination. The text undertakes an epistemological perspective on the restrictions related to contemporary academic artefacts, such as in the article formats, with the aim of eliciting paths to create, and advocate acceptance for, more relevant academic artefacts—that is, forms of dissemination for craft research. In the chapter “Video as a Tool for Knowing and Telling in Practice-led Craft Research” by Camilla Groth, this discussion is taken further as the author points to the limitations of the written word in communicating the more experiential aspects of the research that are important in the specific research context, such as the physical actions and movements of the practitioner and their sensory perceptions, both of which may convey important information. The text-based academic artefact is thus challenged, and alternative forms of media, such as audio-visual links in articles or three-dimensional object files, are argued for instead. In this vein, Ulrik Hjort-Lassen also uses video in his attempts to convey his timber-framing craft skills to the next generation through the development of learning resources, as presented in the chapter “Making Instructions: Developing Learning Resources in the Craft of Timber Framing.”

In the second theme, *Science in Crafts*, three chapters describe the use of existing scientific research methods that are modified for the purpose of craft research. While research through craft practices are new in the academic field, new methodologies that take the nature of the practice into account need to be developed. Often, sensory evaluations of materials or situations are highlighted in this context, which makes the researcher's own longitudinal craft experience a necessary part of the analysis. Arja Källbom's chapter, "Using Profiling Methods to Develop the Sensory Vocabulary of Architectural Painters Who Use Linseed Oils," shows that subjective evaluations are necessary in craft research, but that their credibility may be asserted by group evaluations or the use of systematic approaches, such as the Repertory Grid Method. Similarly, Lars Eriksson writes in his chapter, "The Waiter's Craft Knowledge of Meal-design," about how visualisations through Time Geography help him to research his practice using rigorous methods from the field of Human Geography. The third chapter in this theme, "Exploring Folk Art in Historical Interiors" by Ingalill Nyström, Anneli Palm-sköld, and Johan Knutsson, explores the Art Technological Source Research method. These methods are borrowed from other contexts and modified to suit the practices under study here. By supplementing research through human actions with a structured research setting, rigour is added to both data collection and analysis.

The third theme is about *Craft Reconstructions*. Reconstruction places the researcher closer to a situated understanding of the prerequisites of the artefact under study and may facilitate an embodied understanding of previous craft practices. Even in cases where craft knowledge is lost, the methodologies developed in the following two chapters may

inspire researchers to look further than historical texts for answers to their research questions. The chapter "Notations on Craft: Movement, Gesture and Bodily Expression," by Harald Bentz Høgseth and Magnús Rannver Rafnsson, explores reconstruction through the craftsperson's gestures and makes the case for developing a notation system based on the movements of the practitioner, which has the potential to both store and disseminate craft knowledge. Joakim Seiler is also describing his reconstruction processes in the chapter "Gardening Craft Reconstruction," showing how he rediscovered lost, intangible craft knowledge through his embodied knowledge which became accessible through the reconstruction of a craft situation.

As already discussed, the longitudinal craft experience of the researcher is necessary in the analysis of sensory evaluations and judgements. This is highlighted again as we see how historical actions may be traced in the artefacts under study. In this fourth theme of *Craft Interpretations*, the chapters display the value of the practitioner-researcher's knowledge and experience of craft practice in multidisciplinary contexts and in relation to education. In the chapter "Traces of a Textile Tradition," Annelie Holmberg is using her own craft knowledge to interpret the different types of textile manufacture and how the traditions have changed over time. Fredrik Leijonhufvud, in the chapter "Interpretation of Boats in a Craft Tradition," is trying out different methods of documenting old clinker boats through which he is decoding craft knowledge. In this process he is using his own experience of building traditional wooden boats. Similarly, ceramist and archaeologist Katarina Botwid is utilising her specific knowledge about ceramic crafts in her interpretation of archaeological findings in the chapter "Craft Knowledge in the Service of Archaeology."

Craft research takes place in many different domains and contexts. The fifth theme, *Making as Research*, explores notions of artistic research through craft. Here, the act of making is, in some respects, a research process in itself. By forming material, we may form research questions that are answered only in the unfolding of a material processing of thoughts and tests. In the following three chapters, the idea of a making process as a way of communicating and understanding others is made visible. Anna Lovisa Holmquist's chapter, "The Production Novella as a Textual and Visual Narrative Method in Craft-based Design," visualises and communicates the atmosphere of the deteriorating small-scale factory environment through both images and words, raising questions of the borders between manual and production-based craft practices. In Birgitta Nordström and Camilla Groth's chapter, "The Role of the Weaver in the Encounter with Life and Death," craft practices are used as a means for engaging with and communicating difficult issues between people and as a way to soften the culture of meeting death. Meanings inherent in and through both craft objects and the craft practice itself are vented in the chapter "On Wheel-throwing and Meaning," by Mårten Medbo.

In the sixth theme on *Re-classification*, the authors discuss classification as a tool in the personal, group, and educational sense-making process of craft practices. Essentially, it may be both a clarification and a communication tool. In the chapter "Understanding through Blacksmithing Techniques," Gustav Thane is attempting to classify verbs used in the practice of blacksmithing in order to analyse the actions within his practice. In the chapter "Classification of Plant Propagation Practice," Tina Westerlund presents her classification system for gathering documented knowledge on plants'

propagation for the purpose of a systematic knowledge communication and dissemination.

The last chapter in the book is an epilogue and reflection by philosopher Bengt Molander on the concept of theory as an idea, a term, and rhetoric.<sup>2</sup> Theory is an ambiguous concept with different meanings and uses in scholarly society. Molander seeks to enable a concept of craft theory that is essentially developed through craft practice and studies of craft practice emanating from this practice itself.

## FINAL NOTES

By gathering contributions from craft researchers in an anthology, we contribute to promoting craft as a subject for higher education and research in its own right. However, as may be seen from this introduction, crafting and making practices are ubiquitous and exist everywhere where human, artificial, and material culture takes place. The study of own knowledge in relation to practice is not uncomplicated and often requires developing a method for enquiry before setting out. An overall impression of the research presented in this anthology is that practice fields may benefit from academic research but they still need to keep the practice alive in this process. By studying crafts through practice, the practice avoids being turned into lifeless data and is kept alive, but this has to be reflected all through the process, through a methodology that facilitates data documentation and analysis that doesn't change the modalities of the data too far away from the original (see also Eriksson et al. 2019). This means that the academic artefacts or dissemination form should ideally reflect the processes, materials, and modalities that are under study. Improvements in traditional publishing are under way through the inclusion of audio-visual formats in online publications. Similar evaluations of craft research should

ideally take into account the artefacts and the processes dealt with in formats that are as accurate as possible in educational contexts. Here, the traditions in the field of artistic research have led the way forward. In the same way, craft research may benefit from methodological advances in other traditional sciences. The craft researchers presented here have borrowed and developed methodologies like time-geography, ethnomethodology, conversation analysis, and autoethnography. In addition, critical and reflexive approaches from traditional sciences add to the rigour of subjective evaluations and aid categorical studies and the generalisation and accumulation of research results. While the anthology presents various methods and contexts for craft research, the one thing that they all have in common is the benefit of a longitudinal personal experience as a craft practitioner in the particular craft field under study. This points to the advantages that the craft practitioner has in the research field and to the necessity of opening up the possibilities for practitioners to conduct academic research in their own practice field. While being experts in their own domain, the academic practitioner-researcher has an education that spans both the craft practice and the practice of research, making them ideal collaborators for transdisciplinary research.

The main contribution of this book is the case collection and the reflection on methods developed in the search for the best way to capture the fleeting experiential knowledge of the practitioners. Additionally, it gives a voice to the practitioner in the general field of craft research. The anthology also adds to the developments presented above through its wider acknowledgement of craftsmanship that extends the borders of craft theory and its discourse beyond the arts and crafts. The anthology thus also aims to provide a platform for developing context-

appropriate research strategies and associating with the Craft Sciences beyond the borders of faculties and disciplines. Through concrete examples of methodological developments that are custom made for the particularities of human-material interactions and the living nature of practical work, it offers inspiration for practitioners and researchers in various contexts. Due to this approach it may contribute to new knowledge in research methodology, philosophy of science, pedagogy, and organisational studies, but also in closely related fields such as conservation, cultural sciences, and art and design. As research conducted by practitioner-researchers is gaining traction internationally, too, we anticipate that the readers will be an international crowd of researchers and educators in both academic and vocational craft contexts who are especially interested in the methods developed here and the general discussion on experiential knowledge and the dissemination of such knowledge. Additionally, we hope that this anthology could lift the Nordic craft research tradition into the international arena where it has not yet earned too much attention. The Nordic countries have traditionally contributed to this field of research in their respective local languages and are relatively unknown at an international level, despite having a solid development in this area. Ultimately, we hope that the anthology will form a resource for researchers but also for students and teachers in all cycles of higher education within crafts and craft related domains, nationally and internationally.



## REFERENCES

- Adamson, Glenn. 2007. *Thinking through Craft*. New York: Berg.
- Almevik, Gunnar. 2016. "From Archive to Living Heritage." In *Crafting Cultural Heritage*, edited by Anneli Palmsköld, Johanna Rosenqvist, and Gunnar Almevik, 76-99. Gothenburg: University of Gothenburg. Accessed 4 November 2021. <https://gupea.ub.gu.se/handle/2077/42095>
- Almevik, Gunnar. 2019. "Hantverksvetenskap och vetenskapligt hantverk. Om utvärdering av lärandemål i hantverksinriktad högskoleutbildning." *FORMAkademisk Journal*, Vol. 12: Article 4, 1-14.
- Almevik, Gunnar, Patrik Jarefjäll, and Otto Samuelsson. 2013. "Tacit Record. Augmented Documentation Method to Access Traditional Blacksmith Skills." In *Beyond Control: The Collaborative Museum and its Challenges*, edited by Halina Gottlieb, 143-59. Stockholm: Nordic Organization for Digital Excellence in Museums.
- Almevik, Gunnar and Karl-Magnus Melin. 2016. "Conservation Theory for Enhanced Craft Practice." In *Structural Analysis of Historical Constructions*, edited by Koen Van Balen and Els Verstrynghe, 1011-1018. Leuven: KU Leuven.
- Almevik, Gunnar, and Christer Gustafsson, eds. 2021. *Kulturvård. En introduktion*. Gothenburg: Korpen.
- Barile, Sergio, Franco Giacomo, Noto Giancarlo, and Marialuisa Saviano. 2012. "Structure and Dynamics of a 'T-Shaped' Knowledge: From Individuals to Cooperating Communities of Practice." *Service Science* 4 (2): 161-80. <https://doi.org/10.1287/serv.1120.0014>.
- Borgdorff, Henk. 2012. *The Conflict of the Faculties: Perspectives on Artistic Research and Academia*. Leiden: Leiden University Press.
- Borgdorff, Henk, Peter Peters, and Trevor Pinch, eds. 2020. *Dialogues between Artistic Research and Science and Technology Studies*. New York: Routledge.
- Campbell, Kimberly Hill. 2013. "A Call to Action: Why We Need More Practitioner Research." *Democracy and Education* 21 (2): 1-8.
- Candy, Linda. 2006. 'Practice-based Research: A Guide', Creativity and Cognition Studios, University of Technology, Sydney. Accessed 8 June 2019. <http://www.creativityandcognition.com/resources/PBR%20Guide-1.1-2006.pdf>.
- Candy, Linda, and Ernest Edmonds. 2018. "Practice-based Research in the Creative Arts, Foundations and Futures from the Frontline." *Leonardo* 51 (1): 63-69.
- Coy, Michael. 1989. *Apprenticeship: From Theory to Method and Back Again*. Albany: State University of New York.
- Daichendt, James G. 2012. *Artist Scholar. Reflections on Writing and Research*. Bristol: Intellect.
- Dewey, John. [1934] 2005. *Art as Experience*. New York: Perigee Books.
- Dormer, Peter, ed. 1997. *The Culture of Craft*. Manchester: Manchester University Press.
- Ehn, Billy. 2011. "Doing-it-yourself: Autoethnography of Manual Work." *Ethnologia Europaea* 41 (1): 53-63.
- Ehn, Billy. 2014. "Komma åt detaljerna - Att intervjuva, observera och skriva om traditionella hantverkskunskaper." *Hantverkare emellan*: 30-43. Edited by Gunnar Almevik, Sara Höglund and Anna Winbladh. Mariestad, The Craft Laboratory, University of Gothenburg.
- Eriksson, Jonny. 2019. "Kalkbruk - krympsprickor och historisk utveckling av material, metoder och förhållningssätt." Doctoral Thesis. Gothenburg: Studies in Conservation, Acta Universitatis Gothoburgensis.
- Eriksson, Lars, Joakim Seiler, Patrik Jarefjäll, and Gunnar Almevik. 2019. "The Time-space of Craftsmanship." *Craft Research* 10 (1): 17-39.
- Frayling, Christopher. 1993. "Research in Art and Design." Royal College of Art Research Paper Series, 1(1).
- Frayling, Christopher, Valerie Stead, Bruce Archer, Nicholas Cook, James Powel, Victor Sage, Stephen. Scrivener, and Michael Tovey. 1997. *Practice-based Doctorates in the Creating and Performing Arts and Design*. Lichfield: UK Council for Graduate Education.



- Geiger, Vince, Tracey Muir and Janeen Lamb. 2016. Video-stimulated recall as a catalyst for teacher professional learning. *Journal of Mathematics Teacher Education* 19 (5), 457-475. Netherlands: Springer Netherlands.
- Gherardi, Silvia. 2000. "Practice-based Theorizing on Learning and Knowing in Organizations. Introduction to the Special Issue on Knowing in Practice", *Organization* 7 (2): 211–23.
- Glassie, Henry. 1999. *Material Culture*. Bloomington, IN: Indiana University Press.
- Gowlland, Geoffrey. 2015. "Unpacking Craft Skills: What Can Images Reveal about the Embodied Experience of Craft?" *Visual Anthropology* 28 (4): 286–97.
- Gunnarsson, Martin, ed. 2019. *Att utforska praktisk kunskap. Undersökande, prövande och avtäckande metoder*. Huddinge: Södertörn University.
- Gustavsson, Bernt. 1991. *Bildningens väg: tre bildningsideal i svensk arbetarrörelse 1880–1930*. Stockholm: Wahlström & Widstrand.
- Gustavsson, Bernt. 2004. *Kunskap i det praktiska*. Lund: Studentlitteratur.
- Göranzon, Bo. 1990. *Det praktiska intellektet. Datoranvändning och yrkeskunnande*. Stockholm: Carlssons.
- Hafstein, Valdimar. 2018. *Making Intangible Heritage*. Bloomington: Indiana University Press.
- Hasselskog, Peter. 2010. "Slöjdlärares förhållningssätt i undervisningen." Doctoral Thesis. Gotheburg: University of Gothenburg.
- Holtorf, Cornelius, and Kristensen Troels Myrup. 2015. "Heritage Erasure. Re-thinking 'Protection' and 'Preservation'." *International Journal of Heritage Studies* 21(4): 313–17.
- Jarefjäll, Patrik. 2016. *Navarsmide: en metodstudie ur ett hantverksperspektiv*. Licentiate Thesis. Gotheburg: University of Gothenburg.
- Johansson, Marlène. 2002. "Slöjdpraktik i skolan – hand, tanke, kommunikation och andra medierande redskap." Doctoral Thesis. Gothenburg: Acta Universitatis Gothoburgensis. Studies in Educational Sciences.
- Josefson, Ingela. 1988. *Från lärling till mästare, om kunskap i vården*. Lund: Studentlitteratur.
- Josefson, Ingela. 1991. *Kunskapens former: det reflekterade yrkeskunnandet*. Stockholm: Carlssons.
- Kokko, Sirpa, Gunnar Almevik, Harald B. Høgseth, and Pirita Seitamaa-Hakkarainen. 2020a. "Mapping the Methodologies of the Craft Sciences in Finland, Sweden and Norway." *Craft Research* 11 (2): 177–209. [https://doi.org/10.1386/crre\\_00025\\_1](https://doi.org/10.1386/crre_00025_1).
- Kuijpers, Maikel. H. G. 2018. "The Bronze Age, a World of Specialists? Metalwork from the Perspective of Skill and Material Specialisation." *European Journal of Archaeology* 21(4): 550–71.
- Källbom, Arja, Asgeir Nilsen, and Åsa Öström. 2019. "Olfactory Description for Refined Linseed Oils for Paints: Characterization for Reconstructing Material and Craft Knowledge in Paintmaking." *Journal of Sensory Studies* 34 (2) e12485.
- Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.
- Livholts, Mona, and Maria Tamboukou. 2015. *Discourse and Narrative Methods*. London: Sage.
- Malafouris, Lambros. 2013. *How Things Shape the Mind: A Theory of Material Engagement*. Cambridge, MA: The MIT Press.
- Marchand, Trevor H. J. 2012. "Knowledge in Hand: Explorations of Brain, Hand and Tool." In *The Sage Handbook of Social Anthropology*, edited by Richard Fardon, Olivia Harris, Trevor Marchant, Mark Nuttall, Cris Shore, Veronica Strang, and Richard Wilson, 260–69. London: Sage.
- Marchand, Trevor H. J. 2015. "A Diary of Filmmaking with Djenné Masons: From 'Studies of' toward 'Studies with'." *Visual Anthropology* 28 (4): 308–23.
- Marchand, Trevor H. J. ed. 2016. *Craftwork as Problem Solving: Ethnographic Studies of Design and Making*. Farnham: Taylor and Francis.

- McCullough, Malcolm. 1996. *Abstracting Craft: The Practiced Digitalized Hand*. Cambridge, MA: The MIT Press.
- Medbo, Mårten. 2016. "Lerbaserad erfarenhet och språklighet" ["Clay-based Experience and Linguistics"]. Doctoral Thesis. Faculty of Fine, Applied and Performing Arts, University of Gothenburg. ArtMonitor.
- Mäkelä, Maarit, and Sara Routarinne. 2006. "Connecting Different Practices." In *The Art of Research: Research Practices in Art and Design*, edited by Maarit Mäkelä and Sara Routarinne, 10–38. Helsinki: University of Art and Design.
- Mäkelä, Maarit, and Nithikul Nimkulrat. 2018. "Documentation as a Practice-led Research Tool for Reflection on Experiential Knowledge." *FormAkademisk - Research Journal of Design and Design Education* 11 (2) Article 5:1-16.
- Molander, Bengt. 1996. *Kunskap i Handling [The Practice of Knowing and Knowing in Practices]*. Göteborg: Daidalos.
- Molander, Bengt. 2017. "Tankens frihet och längtan efter verklighet. Om 'teori' som idé, begrepp och retorik." In *Hantverksvetenskap*, edited by Gunnar Almevik, 14–36. Göteborg: Hantverkslaboratoriet, Göteborgs Universitet.
- Newen, Albert, Shaun Gallagher, and Leon de Bruin. 2018. "Introduction: 4E Cognition: Historical Roots, Key Concepts, and Central Issues." In *The Oxford Handbook of 4E Cognition*, edited by Albert Newen, Shaun Gallagher, and Leon de Bruin, 3–8. Oxford: Oxford University Press.
- Nicolini, Davide. 2009. "Zooming In and Out: Studying Practices by Switching Theoretical Lenses and Trailing Connections." *Organization Studies* 30 (12): 1391–418.
- Nicolini, Davide, Silvia Gherardi, and Dvora Yanow. 2003. "Introduction: Toward a Practice-Based View of Knowing and Learning in Organizations." In *Knowing in Organizations: A PracticeBased Approach*, edited by D. Nicolini, S. Gherardi, and D. Yanow. Armonk, NY: ME Sharpe. 3-31.
- Niederer, Kristina, and Linden Reilly. 2010. "Research Practice in Art and Design: Experiential Knowledge and Organized Inquiry." *Journal of Research Practice* 6 (2): Article E2, 1–11.
- Niederer, Kristina, and Katherine Townsend, eds. 2015. "Empowering Crafts: Intangible Heritage, Women and Socially Disadvantaged Groups" (editorial). *Craft Research* 6 (1): 3–8.
- Nimkulrat, Nithikul. 2012. "Hands-on Intellect: Integrating Craft Practice into Design Research." *International Journal of Design* 6 (3): 1–14.
- Nimkulrat, Nithikul, Kristina Niederer, and Mark Evans, eds. 2015. Editorial: On understanding Expertise, Connoisseurship and Experiential knowledge in Professional Practice." *Journal of Research Practice* 11 (2) Article E1.
- O'Connor, Erin. 2005. "Embodied Knowledge: The Experience of Meaning and the Struggle towards Proficiency in Glassblowing." *Ethnography* 6 (2): 183–204.
- O'Connor, Erin. 2017. Touching Tacit Knowledge: Handwork as Ethnographic Method in a Glassblowing Studio. *Qualitative Research* 17(2): 217–30.
- Pink, Sarah. 2009. "Re-Sensing Participant Observation: Sensory Emplaced Learning." In *Doing Sensory Ethnography*, 63–80. London: Sage.
- Planke, Terje. 2001. "Tradisjonsanalyse: En studie av kunnskap og båter." Doctoral dissertation. Det historisk-filosofiske fakultet, Universitetet i Oslo.
- Prown, Jules David. 2001. "Mind in Matter: An Introduction to Material Culture Theory and Method." In *Art as Evidence: Writings on Art and Material Culture*, 69–95. Yale: Yale University Press.
- Pye, David. 1995. *The Nature and Art of Workmanship*. London: The Herbert Press.
- Risatti, Howard. 2009. *A Theory of Craft: Function and Aesthetic Expressions*. Chapel Hill, NC: University of North Carolina Press.
- Rolf, Bertil. 1991. *Profession, tradition och tyst kunskap: en studie i Michael Polanyis teori om den professionella kunskapens tysta dimension*. Nora: Nya Doxa.
- Rust, Chris, Judith Mottram, and Jeremy Till. 2007. *Review of Practice-led Research in Art, Design and Architecture*. Bristol: Arts and Humanities Research Council.

- Schwab, Michael, and H. Borgdorff. 2014. *The Exposition of Artistic Research: Publishing Art in Academia*. Leiden: Leiden University Press.
- Schön, Donald. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
- Seiler, Joakim. 2018. "Historic Lawn Management Regimes: Gardeners' Skills in Lawn Care at Gunnebo House and Gardens." *Bebyggelsehistorisk tidskrift* 75: 8–25
- Seitamaa-Hakkarainen, Piritä, and Kai Hakkarainen. 2001. Composition and Construction in Experts' and Novices' Weaving Design. *Design Studies* 22 (1): 44–66.
- Seitamaa-Hakkarainen, Piritä, Minna Huottilainen, Maarit Mäkelä, Camilla Groth, and Kai Hakkarainen. 2016. "How Can Neuroscience Help to Understand Design and Craft Activity? The Promise of Cognitive Neuroscience in Design Studies." *FormAkademisk* 9 (1): 1–16.
- Sennett, Richard. 2009. *The Craftsman*. London: Penguin Books.
- Smith, Laurajane. 2006. *Uses of Heritage*. New York: Routledge.
- Smith, Laurajane, and Natsuko Akagawa, eds. 2009. *Intangible Heritage*. New York: Routledge.
- Smith, Pamela H. 2016. "Historians in the Laboratory: Reconstruction of Renaissance Art and Technology in the Making and Knowing Project." *Art History* 39 (2): 210–33.
- Solberg, Anne. 2017. "Developing Doctorateness in Art, Design and Architecture." PhD thesis, University of South-Eastern Norway.
- Strati, Antonio. 2003. "Knowing in Practice: Aesthetic Understanding and Tacit Knowledge." In *Knowing Organizations: A Practice-based Approach*, edited by Davide Nicolini, Silvia Gherardi, and Dvora Yanow, 53–75. New York: Sharpe.
- Strati, Antonio. 2007. "Sensible Knowledge and Practice-based Learning." *Management Learning* 38 (1): 61–77.
- Sjömar, Peter. 2017. "Hantverksvetenskap. Rapport från försök med hantverksinriktad forskarutbildning." In *Hantverksvetenskap*, edited by Gunnar Almevik, 62–86. Mariefstad, The Crafts Laboratory, University of Gothenburg.
- Swedish Academy Dictionary [SAOB] Headword: "Hantverk" ["Craft"].
- Swedish Higher Education Authority [HSV]. 1997. *Konstnärlig högskoleexamen i konst & design vid fem hantverksskolor – Examensrättsprövning*. Stockholm: Högskoleverket.
- Townsend, Katherine, Ania Sadkowska, and Juliana Sissons. 2017. "Emotional Fit: Developing a New Fashion Methodology with Older Women." *Clothing Cultures* 4 (3): 235–53.
- Varto, Juha. 2018. *Artistic Research. What is it? Who does it? Why?* Espoo: Aalto ARTs Books.
- Westerlund, Tina. 2017. "Trädgårdsmästarens förökningsmetoder: dokumentation av hantverksskunskap." Doctoral Thesis. Gothenburg: University of Gothenburg.
- Wilson, Mick, and Schelte van Ruiten, eds. 2013. *SHARE, Handbook for Artistic Research Education*. Amsterdam: Elte European League of Institutes of the Arts.

## ENDNOTES

1. Bengt Molanders's note: Cf. Polanyi's term "maxim," a rule that only those that are already skilled can follow (Polanyi 1978, 30–31). Cf. also Winch (2010) about "knowing how something is done" being one thing and skilled execution another.

2. Bengt Molanders text is appended to the anthology and has not undergone the peer-review process by Kriterium. The text has been published previously in Swedish, with the title "Tankens frihet och längtan efter verklighet. Om »teori« som idé, begrepp och retorik", in the anthology *Hantverksvetenskap*, edited by Gunnar Almevik and published by The Craft Laboratory, University of Gothenburg. The text has been translated by Katherine Stuart.