Conference proceedings of the 2nd Biennial International Conference for the Craft Sciences—BICCS 2023

INTRODUCTION
The papers in this issue comprise the proceedings of the 2nd Biennial International Conference for the Craft Sciences, held 20–22 September 2023 in Mariestad at the Craft Laboratory, affiliated with the Department of Conservation, University of Gothenburg, Sweden.

Craft is an integral aspect of daily life and work, activated in all the knowledgeable processes of making and transforming ideas into artefacts and services. Craft is commonly anticipated as a form of production, but it may also be practiced as a social and political activity and as a way of knowing and being in the world. Craft is omnipresent and multi-folded. Consequently, craft research is diverse, conducted across and within different disciplines and academic contexts, and operates with distinct perspectives and approaches.

The Biennial International Conference for the Craft Sciences provides an international platform for the exchange and communication of craft research between different fields and across the borders.
of faculties and disciplines. Craft sciences offers a community of shared interest in craft and research, and the conference aims to expose the variety of topics, source material, methods, perspectives and results that reside in this transverse field. The inaugural BICCS conference was held 4–6 May 2021 (Groth, Westerlund & Almevik 2021). Although technically based in Mariestad, the first edition of the conference was held online due to the Covid-19 pandemic. Thus, this second edition of BICCS provides the first opportunity to use this platform to meet, mingle and exchange experiences on site.

Research communication is a defining activity for any research, but the formats for communication and the types of outputs or genres of research are delimited. It is a fact that the academic system is very much reliant on textual output. As a result, mainstream outputs focus on the production of written descriptions in a set of textual genres, such as full research articles, conference papers, technical reports, case studies, reviews, books and research applications. To conform to these genres, the research needs to be translated into words, a process further restricted by the accepted disposition and rules concerning format.

The traditional research genres of academic writing may suffice in many cases, but there is also a need to find other ways of research communication to substantiate the motion, sensation, vision and haptic experience in craft. Traditional papers may be enhanced not only by images and other graphical figures but also by media elements of sound, video and 3D models. In such cases, the text can be delimited with the intention of encouraging the researcher to use different media and extended captions that are excluded from the word count.

The Craft Laboratory has, in collaboration with FormAkademisk Journal and the Gothenburg Research Infrastructure in Digital Humanities at the University of Gothenburg, developed new genres for research communication that may better elicit performative and material aspects, still with the standards of evidence-based research and the process of peer review. These genres are exhibition articles, performance articles and interactive articles, and this special issue includes examples of two of these formats.

The exhibition article aims to help the researcher share sensorial inputs and outputs by displaying products, tools, materials and equipment. The exhibition article consists of a text part and a video part. First, the researcher will communicate the research process in a shorter written text, presenting the meta-narrative of the research, including the research questions, methods and perspectives, the analysis and discussions of the results and their implications. The text is peer reviewed, and the exhibition is presented by the researcher in situ during the conference. The time is limited to 20 minutes, documented in a single footage, followed by a discussion with the peers. Hereafter, the exhibition article, consisting of the video documentation of the exhibition and the text section, undergoes a final review. The same process applies to the performance article and the interactive article. The aim of the performance article is to help the researcher communicate embodied and sensory aspects of the research by showing and telling. The researcher is encouraged to talk about the making while performing the crafts to communicate reflection in action. The performance is like an exhibition article filmed on site during the conference. The interactive article, which has not been used in this year’s conference, aims to help the researcher communicate with peers through digital interactive environments in 3D. The interactivity could be immersive virtual reality or augmented reality applications but assessable in both PC and MacOS formats.

For the second edition of the Biennial International Conference for the Craft Sciences, research contributions from any discipline or subject field related to crafts have been welcome. The conference contributors include 103 researchers from 15 countries in 4 continents. This special issue comprises 57 articles, of which 8 are exhibition articles and 5 are performance articles. Many researchers presenting at the conference are from the Nordic and Baltic regions. There is a frequent representation from the Netherlands and the UK among other European countries, and we also have contributors from Israel, Australia, Canada and the USA. A goal for the next BICCS conference is to attract craft researchers from Asia, Africa and South America, where there are strong craft research communities. The conference is carried out in a hybrid format, where traditional talks and discussions are open for online attendance.

The conference has invited two keynote speakers to give their perspectives on craft. Nithikul Nimkulrat is a Toronto-based textile artist and researcher who intertwines academic research with
textile practice, focusing on the experiential knowledge of craft processes in the design context. In the keynote lecture *Traces of Experiential Knowledge on Artefacts*, she raises the question of the possibility of grasping the experiential knowledge of a craftsperson by observing visible traces of an artefact that the practitioner creates. If so, how and by whom? Why is it important for practitioners to trace back their own experiential knowledge? She concludes that it is possible and meaningful to observe and learn from traces of craft making and thinking. Such traces, she states, do not only embody and reflect the practitioner’s skill and time but can also evoke their memories and bestow the value of their experience, which can also be grasped by other practitioners in the same or related fields.

Maikel Kuijpers is an archaeologist in European prehistory and researcher at Leiden University. His work concerns the formulation of knowledge over time, cognitive archaeology, craftsmanship and skill and has reached a broad audience through the Routledge book *An Archaeology of Skill* (Kuijpers 2017). In the keynote lecture *Why skill matters: From Bronze Age metalworking to the future of crafts*, he will take us on a journey exploring the connections among craft, science and technology through the notion of skill and throughout history. Skill, he argues, is an active form of knowledge that emerges when humans and materials meet to make something. It is a process of discovery, seeing possibilities and putting them into practice.

**SESSION THEMES**

The call for sessions for BICCS 2023 resulted in 16 proposals for research themes, which after review and collaboration, were boiled down to 11 sessions, forming the thematic framework for the conference. In addition, the conference included an open poster session that is not included in this special issue, but the posters are published on the conference website (for contributions not included in these proceedings, see: https://biccs.dh.gu.se). The call for papers encouraged contributions from any discipline or field that includes craft practice and with the scope of any of these themes (mainly following the wordings of the session proposals):

**Embodied making and learning**

Craft practices are present in all sections of society and in multiple forms and levels. Doing something well, considering the environment, others’ well-being and the common good, is empowering and a source of joy and can become a livelihood. Learning to do something well takes time and patience, requires thought and concentration, and grows endurance and persistence. However, craft learning seldom happens in a vacuum but requires a community of practice in which skills and ways of making and being are communicated bodily through show and tell, mimicking and embodiment of a craft culture. The session comprises research on craft learning situations at different levels of training and educational contexts, both in formal and informal learning situations, inside or outside of academia and in any cultural or professional context. The special focus is craft learning studies that consider embodied learning through human–material dialogues and learning through making. The session organisers are Camilla Groth, Kirstine Riis and Anne Louise Bang, who also chaired the conference session and edited the following contributions:

- **Stitching Together (in) Anthropology Class: On the Use of Craft Practices in Higher Education Humanities**, by *Lydia Maria Arantes*
- **Collaborative Making: Storytelling, Saving Skills and Preserving Memories**, by *Charlotte Mary Goldthorpe*
- **What I learned by doing craft when I got terminal cancer: On woodcarving and psychophysical wellbeing from an insider perspective**, by *Marte S. Gulliksen*
- **From an Embodied Understanding to Ethical Considerations during Creative Practice**, by *Priska Falin, Petra Falin & Maarit Mäkelä*
- **Embodied learning made visible through line-drawing: Examples from sloyd education**, by *Elisabet Jagell*
• Negotiation of Forces in Performative Weaving (performance article, with a remaining final review after the on-site performance), by Rosanna Vibe
• Skills, craft and poiesis-intensive innovation, by Cristina Grasseni
• Queering Craft in Santa Clara del Cobre: Coppersmithing as a Practice of Care, by Michele A. Feder-Nadoff
• Human-Material Dialogues Through the Use of Robotics: Embodied Craft Learning in an Architectural Educational Context Exploring Patterns in Clay, by Flemming Tyve Hansen
• Hartland Hanga: Capturing creative communication of tacit knowledge in printmaking, by Wuon-Gean Ho

Teaching and learning crafts in various contexts
To keep crafts alive, it is necessary to sustain craft skills and knowledge. In many countries, crafts have been removed from the curricula of formal education, but new forms of craft teaching and learning are being developed in craft communities, both in person and virtual. A lot of craft teaching and learning occur in informal contexts of homes, surrounding culture, peer groups, hobby craft clubs, virtual communities and so on. The opportunities to engage in craft teaching and learning reflect societal and cultural changes and attitudes. The targets of craft education are constantly negotiated, for example, at the formal curricular level. Crafts themselves are intersectional, including connotations of gender, religion, ethnicity, age and social class, which may be implicitly intertwined in craft teaching and learning. The session’s contributions explore the teaching and learning of crafts in these various contexts. The session organisers Sirpa Kokko and Niina Väänänen chaired the conference session and edited the following contributions:

• A ‘reverse’ academic drift? Changes in Swedish educational Crafts, by Stina Westerlund
• Changes in Craft Education: A Case Study on General Education in Latvia, by Māra Urdziņa-Deruma
• MOSAIC: designing context-appropriate methodologies for mapping craft skills, by Ruxandra Lupu & Christophe Bardin
• From not yet knowing to achieving directionality: On the roles of materiality in multi-sited, interdisciplinary studio setting, by Anniliina Ormiami, Luis Vega, Varpu Mehto, Priska Falin & Pirita Seittamaa-Hakkarainen
• Advanced student motivation in craft teacher education: Learning new yarn crafts at university study courses, by Anna Kouhia & Tellervo Härkki
• Sensing the Rhythm: Analysing human and non-human movement in a glassblowing process, by Sara Hulkkonen, Miai Lötjönen & Maarit Mäkelä
• Learning through the eyes of another: Online Instruction of Craft Skills Using Eye-Tracking Technology (Performance article, with a remaining final review after the on-site performance), by Barak Pelman, Shirly Bar-Amotz, Christa S.C. Asterhan & Janan Saba

Mapping crafts
Craft, craft techniques and craft objects have been of interest to institutions, professionals, artists, other practitioners and researchers for a long time. These stakeholders have used different methods and techniques to map craft, aiming for understanding, interpreting and communicating craft. Common methods are, for example, to make inventories to document, collect and archive craft by processes of selecting and deselecting. The result of these efforts is multiple, whether it is photographs, sketches, films, interviews, descriptions, manuscripts, handbooks for crafters, books on craft, collections of different kinds or discussions on social media. The contributions to this session focus on historical and contemporary ways of mapping craft. The research raises questions such as the following: What techniques and methods seem to work? What are the ideas and ideologies behind mapping projects?
How do (de)selection processes work? What are the power relations involved? What are the effects of different mapping projects? How sustainable is the method at work? What does the future bring? The session organisers Anneli Palmsköld, Johanna Rosenqvist and Karin Gustavsson chaired the conference session and edited the following contributions:

- Nålbinding connections: Making, mapping and describing connections, by Ingela Andersson Lindberg
- Horsehair weaving for sievewrights: Documentation of an ongoing craft project, by Marie Ekedstedt Bjersing
- Mapping presentations of crafts in the Danish heritage industry: Deliberations on research design and preliminary findings, by Josefine Bill
- Preserving the past to serve the future: Lilli Zickerman’s inventory of textile handicrafts 1914–1931, by Anneli Palmsköld, Karin Gustavsson & Johanna Rosenqvist

Craft economies and beyond
There is renewed interest in crafts. International agencies, museums, universities and local institutions, among others, are giving new ‘emphasis’ to craft and craftmanship. Moreover, international agencies recognise craft’s significant role in the economy. For instance, in their report, the UNDP and UNESCO consider crafts’ economic assets useful for income generation and economic development. However, due to its plurality and complexity, the craft sector does not fit easily into the economic debate. As a result, economic research has mainly focused on specific aspects of the craft sector, such as the impact of the sector on the total economy or job organisation. This limited economic approach risks overlooking crafts’ specific features and needs. This session researched different aspects of the economics of craft in a broad sense. The session organisers Anna Mignosa and Marileen Hofland-Mol chaired the conference session and edited the following contributions:

- Social interaction on craft fairs: Instances of communality, visibility, and trade, by Judith Nyfeler & Patrik Aspers
- Valuation Mechanisms of Fine European Tapestries on the International Auction Market, by Anne-Sophie Radermecker

Crafting the garden: exploring knowledge of place and sustainable practice
This session explores the connection between gardens, craft and sustainability. Gardens and parks are often perceived as sustainable, but it is not uncommon for the materials, tools and methods used to have a negative environmental impact. Gardening has a long tradition, and today, both gardens and gardening can be designated as cultural heritage. There is a need to examine garden crafts more closely as a means to contribute to something more than managing a garden, such as an overall experience, ecology or the understanding of place. The research raises different questions. Can a focus on craft practice help achieve more sustainable parks and gardens? Are there any methods in the gardening tradition worth resuming because their use will reduce climate impact and facilitate climate adaptation? Will the choice of working methods affect garden management and how these places are perceived and understood by visitors? The session organisers Sofia Cele and Tina Westerlund chaired the conference session and edited the following contributions:

- Cutting a box hedge with a sickle: An intangible cultural heritage, by Joakim Seiler
- The Gardener’s Practical Knowledge: The importance of time, reflection and knowledge of a place to become a site builder, by Paula Pihlgren
- Plant Pillars: How to Document the Aesthetic Expressions of Plants? (Exhibition article, with a remaining final review after the on-site exhibition), by Teresia Millberg
- Negotiating authenticity and biodiversity in heritage gardens, by Emma Grönlund & Joakim Seiler
• Craft knowledge and sustainability: a case study in historical cultivation methods, by Catarina Sjöberg & Maria Löfgren
• ‘As the yellow rattle ripens’: Gardening craft as socio-ecological place-making, by Sofia Cele

In connection to this session, there was also a presentation of a Sui generis contribution:

• Gold and green forests. Crafted life stories about Canadian Goldenrod and elm trees (Exhibition article, with a remaining final review after the on-site exhibition), by Anna-Karin Arvidsson

Maritime craft traditions—methods of analysis and reconstruction
Reconstructing the form and craftsmanship connected with traditional boats from either vernacular traditions or archaeological finds shows great complexity. The materiality, tools, work procedures, shape and use of the vessel indeed influence each other. In this session, we will look at different approaches for reconstructing boats and procedures of work, investigating the intentions of former craftspeople. The absence of living tradition bearers reflects the craft tradition being lost or partially lost, but traces of it can be deciphered from the remaining boats and other objects. Both theoretical insights and practical craft experience are crucial in such surveys to accurately interpret craft objects and traditions from the past. This session presents examples of how to survey and interpret boatbuilding and how to preserve or reconstruct this craft tradition. The session organisers Fredrik Leijonhufvud, Terje Planke and Harald Bentz Høgseth chaired the conference session and edited the following contributions:

• Interpreting archaeological boat material, the G1 boat of the Gokstad find (Exhibition article, with a remaining final review after the on-site exhibition), by Svein Erik Øya & Lars Stålegård
• Boatbuilding and urban genesis: Knowledge creation and transfer in traditional boatbuilding craft, by Jasna Sersic
• The becoming of boats: Some reflections on choices in the process of reconstructing archaeological vessels, by Tori Falck
• Reconstructing the use of plumb level from a 19th century clinker boat tradition (Performance article, with a remaining final review after the on-site performance), by Fredrik Leijonhufvud

Innovation in crafts: how to take it, what to make of it
According to the definition used in economy, innovation means bringing a new or considerably upgraded product, service or business process to the market, thus facilitating the growth of the economy. Innovation may concern not only the end-product but also novel technologies, skills and know-how used in production. At first glance, it seems innovation can happen anywhere but in crafts—an area of human cultural practices based on traditional knowledge, manual work, endless repetition and a field of occupation that does not contribute remarkably to the growth of the economy. Addressing the topic of innovation in crafts from a future-orientated perspective, the session theme raises the question: what can we learn from historical craft innovation for the sake of the future? The session aims to bring together an array of analyses and case studies that address innovation in crafts from various historical and geographical perspectives. The research explores ways in which traditional crafts can be innovative. The session organisers Kristi Jõeste, Ave Matsin and Kadri Tüür chaired the conference session and edited the following contributions:

• A Multidisciplinary Approach to the Development of Thermal Clay Modules, by Flemming Tvede Hansen, Isak Worre Foged, Vasiliki Fragkia
• Estonian and Norwegian Sheep Wool as Textile Material: Properties and Possibilities of Use Based on the Example of the Wool of Six Sheep Breeds, by Ave Matsin, Merje Bеilmаnn, Martе Esperiаn Blomli, Astri Kаljuѕ, Liina Lеhis, Ingvild Svorkmo Esperiаn & Dіаnа Tuulik
Craft methods in research—a multidisciplinary approach

Within newly established research areas, the choice of theories and methods is often a major challenge. There is a need for strategies to position craft persons and craft research inside academia to handle professional knowledge, status, salary, visibility and so on. For craft research, a common way is to have practice-led research that explores systematic ways of learning from practice. This means, for example, using research methods conducted through practice and developing knowledge from an insider perspective. In the development of newly established research fields, such as craft sciences, methods and theoretical perspectives are often borrowed from other subject areas. This gives the research a multidisciplinary character, which is often important in developing and shaping a subject’s identity. This session focuses on the variety of methods used in craft research. The session organisers Lars Eriksson and Åsa Öström chaired the conference session and edited the following contributions:

- Capturing and cultivating Print & Book: Craft practices in the UK, by Angie Butler & Sofie Boons
- Exploring the Sustainability of Huizhou Bamboo Carving in the Perspective of Heritage Craft, by Li Zhang & Cees de Bont
- Using a 360° Camera to Record Natural Dyeing Craft Practice, by Beth Pagett
- Sommelier craft: Aesthetic judgements in the performance of decanting (Performance article, with a remaining final review after the on-site performance), by Henrik Scander

Re-threading artisanal practices in history

This session was originally two before it was merged into one. One point of departure lies in the fact that the context of traditional knowledge has changed. Our crafts today operate outside the former field of tradition. At the same time, we have other ideas and tools for analysing, reconstructing and continuing patterns of action. The other point of departure is methodological and focuses on the study of artisanal working practices in a historical context. How may we gain knowledge from the everyday working practices in the workshop of a 16th-century tailor or a 19th-century blacksmith? What kinds of sources are available and how do we approach them? However, only one of the research presentations has been finalised for this special issue. The session organisers Cecilia Candréus, Annelie Holmberg and Cecilia Aneer chaired the conference session and edited the following contributions:

- Digital imaging to unveil traditional craft methods: A case study of a Renaissance Flemish panel, by Teresia Strömgren

Regenerative craft materials

The access and quality of craft materials affect both the making procedures and the artefacts and hence the sustainability and future viability of the craft. Wool is needed for felting, wood for carving and clay for throwing, but there are many specifics regarding what, when or where these different materials are used. Craft materials do not have one exclusive prerogative of quality but rather an immense range of properties that the craftsperson must attend to and value in regard to purpose and context. Craft materials are to a large extent local, carbon oxide-absorbing, renewable, durable but repairable, and possible to reuse, recycle or compost. There are also craft practices that reuse and adapt waste materials for new purposes and thus prolong their life cycle. This session comprises research on craft
materials that evidence or trace a path to move beyond harm mitigation and the reduction of negative impact to achieving net positive benefits for society and ecosystems. The session organisers Géraldine Brun and Gunnar Almevik chaired the conference session and edited the following contributions:

- Field method for visual characterization of deciduous wooden shingles (Exhibition article, with a remaining final review after the on-site exhibition), by Linda Lindblad & Karl-Magnus Melin
- When wood cladding degenerates: Lesson of durability from traditional wood claddings after long weathering in real conditions (Exhibition article, with a remaining final review after the on-site exhibition), by Géraldine Brun
- The story behind an exhibited rag rug: report from a workshop cleaning (Exhibition article, with a remaining final review after the on-site exhibition), by Lena Håkanson
- Re-hackling flax before spinning: Using questions as a method of understanding (Performance article, with a remaining final review after the on-site performance), by Marie Ekstedt Bjersing
- Material-economic aspects of wooden pole fence-buildings: Examples from a flexible building method, by Björn Svantesson
- Building Tiny house from waste: An alternative platform for exploring sustainability, by Ksenija Komazec, Elsa Vaara, Géraldine Brun, Stig Larsson & Helena Tobiasson

Craft, traditional knowledge and Intangible cultural heritage
This session was originally two before it was merged into one. A common thread is the relation between contemporary craft practice, traditional knowledge systems and intangible cultural heritage. There is a strong international policy to support craft as an intangible cultural heritage. Since the adoption of the UNESCO Convention on Intangible Cultural Heritage in 2003, the possibilities for the safeguarding of traditional craftsmanship and knowledge dissemination through wider and transnational communities have developed considerably. In 2017, the Council of Europe presented The European Heritage Strategy for the 21st Century. The strategy builds on the Faro Convention (2005) in identifying heritage as a broad societal asset for sustainable development. This session comprises investigations of the role of craft and traditional knowledge as a societal asset, societal change through craft and traditional knowledge and how craft and traditional knowledge can be used in sustainable development processes. The session organisers Bosse Lagerquist, Anneli Palmsköld and Thomas Cubbin chaired the conference session and edited the following contributions:

- From Craft to Industry, by Inger Marie Ladekarl, Malene Pilgaard Harsaae, Anne Louise Bang, Lena Kramer Pedersen, Tina Cecilie Bull Nielsen & Amalie Ege
- Change and Transformation of Functions in Turkey’s Felt Objects, by Berilsu Tarcan
- Post-COVID craft education: Reflections on a virtual artisan woodblock studio exchange between Australia and India, by Cecilia Heffer
- Crafts and the Origins of Geometry, by Ricardo Nemirovsky, Stephanie Bunn & Francesca Silverton
- To safeguarding traditional basket making for the future (Exhibition article, to with a remaining final review after the on-site exhibition), by Helena Åberg & Sofia Månsson

All submitted research contributions have been through a double-blind peer review process and the evaluation of a scientific committee, thus following the standard quality requirements of academic research outputs. In the conference programme, there were also a limited number of research presentations, including the posters mentioned above, that have not been included in this special issue but are published on the conference website, https://biccs.dh.gu.se.
The many contributions to the BICCS 2023 conference and in this special issue show that craft science is a vital research field stretched over disciplines and faculties in many countries, with a strong peer community capable of crafting a sustainable future.

Mariestad, September 2023

Gunnar Almevik, Géraldine Brun, Anneli Palmsköld and Katarina Saltzman

Special Issue Editorial Team

REFERENCES
