



# EDITORIAL: AN INTRODUCTION TO CRAFTING SUSTAINABILITY

## *Exploring the Interconnections Between Sustainability and Craft*

By special issue guest editors Roger Andre Søråa & Håkon Fyhn

Sustainability has become a critical issue, calling for new conceptualizations of both problems and solutions. This special issue of the Nordic Journal of Science and Technology Studies explores the concept of "Crafting Sustainability". Sustainability is a hot topic in contemporary scholarly debates, with methodological, theoretical, and conceptual contributions from a wide array of research areas, also from Science and Technology Studies. Craft on the other hand has been less of a focal point, although all humans relate to craft on some level.

The furniture we sit in, the houses we inhabit, the tools we use, hobbies we might have etc. – all have a touch of craft included. As humans, we are craftspeople as well as thinkers; craft is deeply embedded at both societal and personal levels. Understanding how we are impacted by craft can help us explore our own humanity. Maybe something handheld, trustworthy and concrete, as crafted things often are, can help ground us in an era of "fake news", "anthropogenic issues" and "epistemological battles"? Craft, as the process of making provides a connection between people as makers and the things made. Not only pottery and wooden furniture are crafted; truth itself is at some level crafted.

STS has a long tradition of highlighting the craft aspect of phenomena, such as the "doing of science" (Fujimura 1996<sup>[1]</sup>), laboratory studies (Latour 1983<sup>[2]</sup>), and labor study traditions (Sørensen 1998<sup>[3]</sup>). Science and Technology Studies is situated in a unique position for analyzing cross-bred conceptualizations such as the merging of Craft and Sustainability.

We are impacting the world through craft, and in this regard, craft prompts a discussion on sustainability issues. As some of the articles in this issue suggest, craft can be seen as part of a sustainable way forward. But also, the idea that sustainability is likewise a part of craft needs to be taken into consideration. Although this is a Nordic Journal of STS, given this issue's many international case studies we wish to emphasize that sustainability issues are global.

How can we understand craft connected to sustainability? By keeping the focus radically interdisciplinary, we have, in good STS tradition, attempted to open the black boxes of both craft and sustainability.

In June 2017 we initiated and hosted the "Crafting Sustainability Workshop" in the Norwegian city of Trondheim, in order to discuss the connection between craft and sustainability. We invited 17 participants with wide interdisciplinary and international backgrounds. During the workshop it became clear that the connection between craft and sustainability is a very fertile topic. All the articles in this special issue are based on presentations held during this workshop.

At the workshop, we asked the participants to characterise both "Craft" and "Sustainability". This proved to be a task generating a multitude of opinions, but also strong resonance between the diverse views. It was discussed how important the different aspects of time were for different professions, and also how teaching and education practices were vastly different between professions that eventually would collaborate to make the same product, e.g. meet in the building of houses. Craftspeople were emphasized as a rather process-focused profession, rather than designers who were more plan oriented.

Sustainability, it was argued, also had an aspect of time geography that needed to be taken into consideration. Craftspeople are often part of the crafted objects' life journey, and have a large responsibility for the crafted objects' impact on society. It was suggested that attention to embodied practices was a key aspect of co-creating, and that the multitude of stories, practices and experiences would be an interesting strand to explore further.

During the workshop it became clear that despite strong resonance, it was not obvious what we meant while using the two essential terms "craft" and "sustainability". Thus it was suggested that the participants should make a further effort to define or describe what they meant by these terms in their articles. Before we return to these terms, let us briefly introduce the articles in question and the content of this special issue.

The front page of this special issue features an installation called "Tranquil Bloom" made of porcelain paper clay by sculptor and professor Rebecca Hutchinson. For Hutchinson, craft is about the intimacy of connection, and in particular a connection to a place. In an opinion piece at the end of the issue she reflects further on



"Working With Space: An opportunity to be considerate and reflective as a human being". Hutchinson describes how her work has been "shaped by ecosystem observation and researched historical botanical motifs found in historical craft".

The first article in this special issue is called "Crafting sustainability? An explorative study of craft in three countercultures as a learning path for the future". Here Hanna Hofverberg, David O. Kronlid and Leif Östman, ask what 'crafting sustainability' could mean in relation to education for sustainable development (ESD). By identifying purpose, skills and approaches to learning in three countercultures they explore the interrelation of craft and ESD narratives. Further they identify three tensions that needs to be addressed if craft is to be educated as ESD, namely which individuals or collectives, the embodied craft person's relation to the world s/he inhabits and what ecological-social-economic dimensions of sustainable development that are being privileged.

In the second article, Alice Owen explores whether craft enterprises can make a distinctive contribution to sustainable development, using two case studies of small UK-based yarn businesses. Owen especially deals with a social aspect of sustainability, by seeing how the yarn crafters build communities. Owen explores craft as "deploying skilled labour to shape physical materials to create a unique item", and investigates this through micro-enterprises with 3 or fewer employees. She explores this using the theoretical framework of Transition Management, and noting the "Ravelry" social media platform for fibre crafters.

In their article "Refugium WA:

crafting connection through plant-relating arts-science experiences of urban ecology" Tanja Beer and and Cristina Hernandez Santin show how craft and hands-on activities can contribute to enable 'flow' through shared 'vegetal' or plant-based activities in Australia. They describe this through "kokedama" (苔玉 "moss ball"), a plant-binding technique from Japan. They show how kokedama can be seen as a comment on the wider ecological debate. One of the contexts for their research is increased urbanisation, showing how allowing a natural focus enables people to disengage from the negative impacts of that context.

The three last articles all deal with craftspeople and craftsmanship in the building industry. They suggest there is a certain lack of acknowledgment of craftspeople in the building industry today, with design and technology, represented by architects and engineers, appearing to be more in focus. As Mattias Tesfaye (2013<sup>[1]</sup>) notes, there are plenty of well designed buildings being built these days, but fewer are well crafted.

In the fourth article, Kathryn Janda provides a historical study suggesting a decline in status for craftspeople in her article "Crafting sustainability in iconic skyscrapers: a system of building professions in transition?". Here she looks at the media presentations of three

distinct skyscrapers in New York – the Empire State Building, the U.N. Secretariat and One World Trade Center. She examines the division between craftspeople, engineers and architects, and how they are framed in different forms of media relating to the building of these skyscrapers. Being a historical comparative article Janda describes how builders had a larger and more positive role in the local media almost a century ago, whilst modern craftspeople are largely ignored in the stories of how the skyscrapers came to be. Janda argues that greater levels of environmental sustainability can be produced with the integrated involvement of architects, engineers, and builders.

Ruth Woods and Marius Korsnes also point to a lack of attention to craftspeople in the task of reducing energy use and increasing the sustainability of the Norwegian building stock in their article "Between Craft and Regulations: Experiences with the Construction of Two 'Super insulated' Buildings in Norway" (2017<sup>[1]</sup>). They look at how craftspeople involved in the construction of low-carbon and energy efficient houses provide useful knowledge when crafting future sustainable buildings. They investigate this through two pilot projects on sustainable building, a passive house in a small municipality, and a zero emission living lab in a city, seeing how different standards can highlight changing demands on craft in the construction industry. Their article investigates how craftspeople deal with these changes in technical building standards, asking if craftspeople's dedication to their work is impacted upon by changes in practices and if skill can help to bridge the gap.

In the sixth and last research article, "Craftsmanship in the Machine – Sustainability through new roles in the crafts of building at a technologized building site", we (Håkon Fyhn and Roger A. Søråa) look ahead to see what new roles craftspeople might find as building sites become increasingly technologized. We suggest that rather than outsourcing the actual building to the lowest bidder, a better way to go forward is to include craftspeople in the planning process. Through a case study from a high-tech building site, applying Lean Construction and robot-production technology, we also suggest that good craftsmanship might be even more important than before, as great skills are required to handle the technologized production. However, the nature of these skills is transforming from the classical "Workmanship of risk" outlined by David Pye (1968<sup>[1]</sup>). Instead we suggest the term "Craftsmanship of uncertainty" to describe the craftsperson in action at a high tech building site, as the ability to provide certain results in an uncertain situation stands out as essential. The technologized production systems require a level of certainty that calls for such skills. This could also contribute to raising the status for the crafts and of craftspeople at building sites.

What can these articles tell us about sustainability? In her article "Crafting sustainability in iconic skyscrapers..." Janda discusses sustainability in a historical perspective. She notes that the term "sustainable" has been in use for 300 years and has carried three main strands of meaning in this time: (1) capable of being endured; (2) capable of being upheld as true, and (3) capable of being maintained or continued at a certain rate or level. She shows how the third



strand of meaning, dating back to 1924, was not linked to environmental sustainability until the 1970s. As her article follows a historical development that begins prior to the notion of environmental sustainability, she sticks with the the root definition of the term: "capable of being maintained or continued", without connecting it primarily to environmental sustainability. As she points out, such use of the term leads us to the question of what is being sustained by the production of these prestige skyscrapers and by whom?

When talking about sustainability today, it is difficult to avoid the now common definition posed by the Brundtland Commission in the report *Our common future* in 1987<sup>[1]</sup>: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987<sup>[1]</sup>). Basically this definition can be seen as an elaboration by the historical definition mentioned by Janda: "capable of being maintained or continued". It is further developed into three frames (ibid): Economical, environmental and social sustainability, as the figure below illustrates:



By seeing sustainability in the intersection between these three frames, the articles deal with different conceptualizations of sustainability, and how craftspeople relate to them. In recent contemporary societal debates about sustainability, environmental sustainability has taken much of the spotlight, although traditionally economic sustainability has also been a widely discussed issue. Quite undervalued to the triumvirate is social sustainability, which deals with intra-human societal debates relating to how humans act on and are impacted by sustainability issues. This is something the articles have considered in relation to crafting.

Hofverberg et al. point out that the definition of sustainability may be too wide. They ask, quite in line with Janda's question above, if

it is at all possible to educate for sustainable development, as there so little consensus about what sustainable development means and what it aims for. How can it then guide education? Woods and Korsnes avoid the challenge of the wide definition by using the term sustainability in a more specific way; they limit their definition of sustainability to the building sphere, quoting Berardi (2013:76<sup>[2]</sup>) who suggests that a sustainable building can be defined as "a healthy facility designed and built in a cradle-to-grave resource-efficient manner, using ecological principles, social equity, and life-cycle quality value, and which promotes a sense of sustainable community".

Owen discusses how yarn craft micro-enterprises can contribute to economic sustainability by providing a means for people to enter the economy with flexible work hours. This flexibility to work when and where one wants is important to many practitioners who have other demanding responsibilities in their lives, such as being caregivers, which had caused them to seek out self employment opportunities. She also looks at how these enterprises deal with waste in regards to environmental sustainability, and how social sustainability is crafted at both an individual and a community level. Her analysis suggests that these crafters are simultaneously consumers and producers.

While most articles adhere to the above trinity, we (Fyhn and Søråa) operate with a slightly different model where the economic aspect is replaced with "cultural sustainability". Also this adhere to the root definition: "capable of being maintained or continued", as it has to do with the craft's ability to sustain a knowledge-tradition and practice into the future. But rather than seeing it terms of preservation of culturally valued crafts, we see it in terms of having sustainable communities of practice that brings forward a certain level of skills in building. They do so by changing and adapting these skills to match a transforming reality. In other words, craftspeople are able to make a living from their craft practice in such a way that they ensure future generations will also have the possibility to learn and make a living from high level craftsmanship.

Beer and Santin's article is an interesting exception as it operates with a slightly different angle to sustainability, more akin to the Deep Ecology tradition, quoting du Plessis and Brandon (2015:56<sup>[3]</sup>) they write that: "Sustainability is based on a value system which holds that both people and nature should be treated with respect and in a spirit of fellowship and mutuality, and actions should focus not only on the wellbeing of humans, but on the wellbeing of the entire social-ecological system. This means that humans have a duty of care that requires them to support the wellbeing and evolution of the social-ecological systems of which they are part, and take responsibility for the consequences of their actions."

We further encouraged the authors to reflect on the word Craft in their articles. Fyhn and Søråa's article approaches craft in terms of David Pye's (1968<sup>[4]</sup>) distinction between workmanship of risk and workmanship of certainty: while the former points to free handed



forming, the latter points to forming guided by a machine; the former tends to be associated with craftsmanship, the latter with machine operation. At the technologized building site Fyhn and Søråa suggest the term “craftsmanship of uncertainty” to grasp the new roles for the crafts of building in securing certain results in a situation characterised by uncertainty.

Woods and Korsnes also discuss craft in the context of building, and they refer to Sennet’s (2008<sup>[1]</sup>) more ethical definition of craft, focusing on attitude towards the work; craftspeople are “dedicated to good work for its own sake”. This represents the special human condition of being engaged and take pride in their work. Woods and Korsnes find that this work ethic is present within the construction industry of their case studies.

Rather than approaching craft by describing particular and typical skills, Janda in her article approaches builders as a profession in relation to other professions, such as engineers and architects. Drawing from Andrew Abbott’s (1988<sup>[2]</sup>) “system of professions”, she is able to show different nuances in the approach to craft, focusing on the mutual interdependence between the professions, at the same time as the status relations between them fluctuates. Her article concludes by arguing that greater coordination between designers and doers in the construction industry, of the kind exhibited in the early days of skyscrapers, would enable the social production of sustainable buildings. For this to happen, however, society would need to place a higher value on tangible outcomes in the built environment.

In her article, Beer uses Sarah Kettley’s (2016<sup>[3]</sup>) contemporary understanding of craft, focusing on the collaborative creativity and potentiality. Her focus is on the collective experiences of craft and sees it in a global context, using plant-crafting from Japan at craft-installations in Australia adhering to the Japanese concept of “wabi -sabi” (roughly translated as seeing the imperfection in created things). Although the crafts of building seek perfection, by putting forth imperfection as an ideal, they suggest that craft can become a way to bring people together through communal imperfection. Here they open a topic that seems to be essential regarding craft: showing how it fosters community through collective making. Whether it is the collective experience of making kokedamas, or the community of practice at the building site, making together fosters and requires community.

Community is also essential in Owen’s article, even if the micro enterprises are distributed and many work alone with their yarn, the development of this crafting as enterprise is a communal effort that both depends on and builds community. Owen emphasizes how craft activities range from the hobby level to the professional level. More specifically she defines craft to mean “deploying skilled labour to shape physical materials creating a unique item.” She explores how innovation and problem solving are keys to craft as a creative application of skills. The desired outcome of the crafting process is by Owen seen as technical, due to the manipulation of materials in order to achieve the intended outcome of the crafted object.

Rather than focusing on manipulation of objects, Hofverberg et al. focus on the hands working with materials in their definition of craft. Quoting Adamson (2007:3<sup>[4]</sup>) they address craft as “making something well through hand skill”. To this definition, Hofverberg et al. add that the human-material interrelations are an essential aspect of learning craft, connecting to Ingold’s (2013:31, 69-70<sup>[5]</sup>) concept of “making as correspondence”. Thus they define craft as “skilled hands making products (together) with materials.” With this definition they are able to explore a craft pedagogy that is needed when craft is educated as a learning path for the future.

Hofverberg et al. point out that crafted things are often associated with something genuine. Thus, one might wonder why it is associated as something genuine? Is it because it produces one of a kind things? Maybe the beautiful imperfection described as wabi-sabi plays a role in this? Or is it because there is a relationship of genuine engagement, as mentioned by Woods and Korsnes, between the craft person and the crafted thing? Or is the crafted thing genuine because it is handmade, thus providing a unique and one-of-a-kind connection through the unique making process between the crafts person and the thing? This definition also provide a comment to the topic of Fyhn and Søråa’s article on technologization: it is not meaningful to say that a machine takes pride in its work, which can lead to new questions to what this imply in respect to automation.

Can the focus on connection between people and things also teach us something about sustainability? A crafting sustainability approach focus on the connection between people, their practices and materialities; these are intertwined and form each other in co-production. Maybe emphasizing such connection in craft can help us point to more sustainable ways forward? “Moving forward by looking back” is a phrase that was mentioned at the initial workshop. Maybe looking backwards towards our crafting connection to the world can be a way to connect for a sustainable way to move forward? The context that the special issue grew from, the Crafting Sustainability workshop, has served as a grounding for this work.

We are proud to finally present this special issue on Crafting Sustainability. It deals with a wide variety of crafting, from craftspeople building gargantuan skyscrapers (Janda) to hypermodern passive houses (Fyhn & Søråa; Woods & Korsnes), to educational craft practices such as Educational Sløyd (Hofverberg et al.) and micro-enterprises (Owen), and also art installations probing questions of what crafting can mean (Hutchinson; Beer & Santin).

The special issue seeks to explore what craft is, what sustainability is, and how these two concepts can be understood together in the term “Crafting Sustainability”. We hope the readers will gain insight and ideas from a topology that is quite different in an STS setting. We thank the editorial board of NJSTS for the opportunity to guest edit this special issue, and warmly recommend it for other emerging research fields and networks in the making. We wish you, the reader, a pleasant reading experience as you delve into the world of Crafting Sustainability.



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