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Citation for published version:

Geru, CB & Kalkreuter, B 2017, Design charrette: Co creating design possibilities for the future. in C Kung, E Lam & Y Lee (eds), *Cumulus Hong Kong 2016: Open Design for E-every-thing*. Cumulus Working Papers, Hong Kong Design Institut, Hong Kong, pp. 283-290, Cumulus Hong Kong 2016, Hong Kong, Hong Kong, 21/11/16. <<https://www.cumulusassociation.org/wp-content/uploads/2017/04/Cumulus-Hong-Kong-Proceeding2016.pdf>>

Link:

[Link to publication record in Heriot-Watt Research Portal](#)

Document Version:

Peer reviewed version

Published In:

Cumulus Hong Kong 2016

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DESIGN CHARRETTE: CO CREATING DESIGN POSSIBILITIES FOR THE FUTURE

ABSTRACT Ref No: P314

Abstract

This paper discusses how multidisciplinary groups approach co-creational design possibilities through craft, potentially moving from shaping the future through individual design practice to making sense of the future with the help of co-creators as they do. (Sanders and Stappers 2014) It reports on observations from a recent Design Charrette on Scottish basket making where makers, designers, architects, engineers, heritage specialists, curators, academics and design students attempted to co create heritage craft practices within a contemporary design context. Multiple data gathering methods illuminate how these heterogeneous actors (Emilsson and Hillgren 2014) contribute and negotiate different ideas and maker practices, and how they resolve conflict in order to “open-up” design possibilities. By envisioning the complex relationships people build with each other and with the material and object cultures in the fuzzy front of end of the design processes (Sanders and Stappers 2008) the paper discusses how new communities of practice may emerge from people who have different ways of knowing and doing. Furthermore, it explores how co-creational and participatory methods contribute to convergences between heritage and design.

Keywords

Design-Craft-Charrette, Co-creation, Heritage

Introduction

In the past four to five decades, scholars have developed a myriad of new approaches to design in order to engage with everyday practices and experiences in a meaningful way, including emotionally. (Sanders and Stappers 2008, Mattelmäki et al. 2014) Methods and techniques have evolved from participatory design to user-centred designing and then on to co-creational design activities. (Sanders and Stappers 2008) Novel approaches within the participatory and collaborative landscape emerged within both research and industry, with some considerable focus on collaborating amongst multiple actors towards creating sustainable futures, as i.e. in IDEO's social innovation, empathic design (Leonard and Rayport 1997, Mattelmäki et al. 2014), emerging and dialogic design for social innovation (Manzini 2016) transition design (Irwin et al. 2015) socially responsive design (Thorpe and Gamman 2011) and design anthropology. (Gunn et al. 2013, Gunn and Donovan 2012)

All these approaches acknowledge a changing landscape of design that is moving from shaping the future through individual design practice to making sense of the future with the help of co-creators (Sanders and Stappers 2014), while further agreeing on designs' need to take a holistic view that combines human, cultural, social, ecological and material values together with innovation and collaborative futuring. (Gunn et al. 2013, Irwin et al. 2015, Bjögvinsson et al. 2012) Notwithstanding the growing momentum in academia, the transformation of moving from designing 'objects' to designing 'social-material assemblies'¹ (Bjögvinsson et al. 2012) is still a major challenge to much of the design community.

Collaboration and co-creation activities are not easily accomplished. As Palmås and Von Busch suggest, they are challenging as they pose dangers of asymmetries especially when designers "run the errands of power, where the participatory design process gets used to create coercion and sugar-coat autocratic processes with a shimmer of 'collaboration'". (Palmås and von Busch 2015, p237) Co-design then becomes an 'antagonistic process' (DiSalvo 2012) that could inhibit democratic participation, when different stakeholders with specific skills bring rise to tensions and power intricacies.

So, how can multi-disciplinary groups best share their ideas, and what really inhibits effective collaborations in the design process and why? These are some of the questions we attempt to answer in our paper, at the interface of heritage and design.

A variety of methods, tools and techniques have been suggested to facilitate such collaborative environments (Sanders and Stappers 2014, Visser et al. 2005), and within this research, we decided on a Charrette to best explore the collaborative knowledge exchange between 'heterogeneous actors'. (Emilson and Hillgren 2014, Bjögvinsson et al. 2012) Design already extensively uses this participatory method, but using such methodologies for craft and design research is lacking in pragmatic examples, as is practice based design and craft research itself. (von Busch et al. 2014)² An opportunity was thus identified to explore a traditional craft practice (Scottish Basket making) and its interactions with design in the

¹ Socio-material assemblies are referred to a collective of human and non-human Things following Latour's expression. Bjögvinsson et al. (2012, p102)

² This is with the exception of the work produced by Tunstall (2013) within the fields of design and anthropology as she works with indigenous and traditional grassroots communities. i.e designer interventions with Aboriginal communities in Australia and craft communities in India. See <http://theconversation.com/remixing-indian-design-anthropology-49188>, other examples highlight the importance of craft for empowerment and social development (Palmås and Von Busch 2014) with the increased demand for craft and design research published through conferences like *Making Futures* that investigate contemporary craft and maker movements for the 21st century.

context of current heritage debates as Scottish basket making is understood as a vernacular craft practice, 'made by the people for the people'; a craft and a trade, where innovation coincides with tradition due to its improvisatory nature in the age-old making process. (Bunn 2015, p24) According to Bunn, the basket making provides an example of how design is manifested through making, as this entirely handcrafted practice cannot be executed by machines. It is a process which demonstrates problem-solving, decision-making and reflection while making, a testament to an engaged practice dealing with body, mind, materials and evoking social memories. (Bunn 2015) Thus, it is 'an open system' that provides room for experimentation, change and development (Bunn 2016, p135), in other words it offers potential to engage with heritage as "(...) past memories to negotiate new expressions and identities."(Smith 2006,p2)

To do so in a Charrette meant going beyond the standard trajectory of a consultation tool merely focusing on consultant-client relationships producing more user-friendly design solutions (Smith 2012, Howard and Somerville 2014) to a rather exploratory method of engagement amongst varied parties all invested in practices and theories of making, heritage and design.

Overview of the Charrette

Charrette Description

The Charrette was held as a one day activity, inviting participants from the heritage sector and creative disciplines. These included makers, designers, architects, textile engineers, curators, academics and design students. The aims of the charrette were to:

- a) observe how multidisciplinary groups co-create by exploring heritage craft practices within a contemporary design context
- b) provide an opportunity to monitor and evaluate varied approaches to design processes
- c) test whether an idea of shared design cultures empowers choices and design directions with people, material and the object cultures

The session involved 25 participants who were recruited on a voluntary basis using an email flyer with a description of the charrette distributed via local creative and arts development organisations³, and word of mouth through private and professional networks.

The pre-requisite for selection was a general interest in Scottish basket making, a background in creative industries or interest in heritage. The reason for such an approach was to get insight into how multidisciplinary groups including the 'community'⁴ (Sarashima 2013) of basket making would interact, contribute and negotiate specialist meanings and values to a wider audience.

³ Creative Arts and Borders Network, <http://www.cabn.info/>

⁴ In heritage discourse, the idea of 'community' is considered integral where an inclusive and a collaborative approach to heritage management are promoted including the multiple stakeholders' viewpoints as well encouraging bottom-up approach. (Clifford at al. 2004, Stefano at al. 2012) Sarashima (2013) recognises producers, practitioners, consumers, policy makers, the state, educators of heritage craft practices as its community- considering both the "lifeworlds' of the practitioners of the cultural form and appreciators of that cultural form" (p138). Hence, the community is not the just its makers, but all contributors or else its public who shape the social, economic, cultural and political aspects of the environment where the heritage craft reside.

Charrette Format

The 25 participants were divided into 5 lots, and with 2 people unable to attend on the day teams comprised of five or four members. The researchers distributed participants to represent as wide a mix of backgrounds as possible in each team so as to get maximum insights into how different stakeholders might work together in the charrette format.

An introduction to design charrettes, and information on the particular format of the one planned were sent out to participants some time prior to arrival to ensure some initial understanding of what to expect on the day. Two facilitators gave structure to the Charrette by maintaining the chosen format and by ensuring activities were kept within the set time frame. A neutral observer documented charrette engagements throughout, considering dynamics between team members as well as engagement with the facilitators and the basket maker.

Table 1:Charrette framework

Time	Activity
9.30 – 10. 00	Getting to know team members and introduction (Author 1 and Facilitator 1)
10.00 -11.30	What is Scottish Basket making with expert practitioner and educator
11.30 -11.50	Heritage and Design by Author 2
11.50 -12.30	Idea generation session (Teams)
1.15 -4.30	Making session (Teams)
4.30 – 5.00	Presentation (Teams)

The charrette was started off by one of the facilitators offering a brief history and rationale behind the format, followed by a demonstration of basic basket making techniques by the invited Scottish Basket maker. Her background as a maker as well as an educator enabled her to first share objects, materials, techniques and narratives of her craft theoretically, before practically instructing participants in two of the most basic techniques of Scottish basketry, namely coiling and weaving, using willow and rush. (See image 1)



Image 1: Demonstration of Scottish basket weaving by the invited maker

Following on from this practical engagement, conversations were directed towards contemporary heritage discourse between place, artefact, behaviour and process in response to a short lecture on design innovation between tradition and invention, localism and international markets, culture and commerce by one of the authors of this paper, who is an academic in the field of design studies. (See table 1 for the workshop format)

Only at this stage, was a brief given to the participants, which asked teams to design an object that reflected heritage and tradition and was inspired by what participants had seen, heard, and were experiencing about basket making practices during the charrette, with outcomes required by the end of the day. Participants were given generative tools (Sanders and Stappers 2014, Visser et al. 2005, Sanders 2000) including drawing material, flip chart paper, post-it-notes and coloured pens to create two-dimensional visual maps to three-dimensional artefacts. Participants were also able to use from this stage onwards actual basket making materials and related resources, including willow, rush, fabric, wool, strings, wires and papers, so as to materially enable the context of basket making to meet contemporary design experiences of the participants.

During the actual design activity, each team's interactions, conversations and phases of design were recorded on four video cameras positioned across the venue to capture the dynamics of group interactions. To further verify and triangulate these digital recordings, facilitator notes and comments and observations from the neutral observer were collected.

Upon completion of the workshop, an online survey amongst participants was undertaken to capture their experiences and attitudes towards this co-creational design experience surrounding heritage. Later in-depth interviews were carried out with willing members of each group to further enhance the understanding of the charrette experience.

Once during the design activity, and again on completion, members were asked to present their ideas in a plenary session to the other teams. The format of a quick presentation during the design session ensured to capture "on the moment" responses and allowed us to

evaluate how the design process changed over time. At the end of the day, all participants were asked to peer-vote for the team that had most successfully answered the brief.

Charrette Findings

Each team adopted different approaches to the design and making process, and outcomes produced were also quite diverse. However, all teams developed valid concepts and discourse towards what they believed could be transformed into a tangible output in answer to the brief. For the purpose of this paper's focus on procedure rather than outcome of a design craft charrette, the online survey will be analysed as to the overall reception of the charrette, with a comparative analysis of the workings of two teams analysing two completely different approaches to team work and resulting nature of output.

Questionnaire responses

19 out of 23 participants responded to the online survey, making the response rate a very respectable 82.6%. The online survey consisted of 8 five point likert scale questions with 2 open ended questions providing more qualitative insights. Chart 1 provides the overall response rate to the likert scale questions (See chart 1)

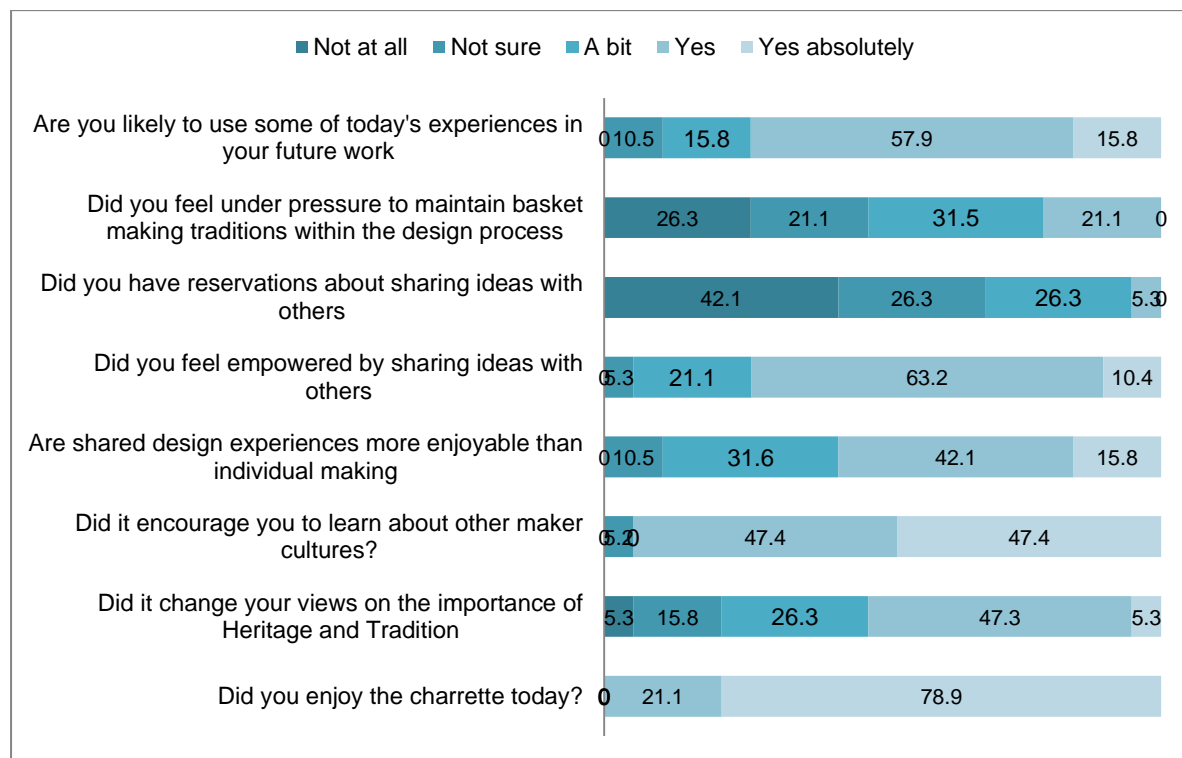


Chart 1: A summary of the Likert Scale data

The analysis and comparison of the data indicates that all the members had enjoyed the charrette experience with 52.6% emphatically changing their view on the importance of heritage and a 26.3% changing it at least a bit. An overwhelming 94.8% stated that the charrette encouraged them to learn about a new maker culture. A clearly identifiable outcome was that the vast majority of participants enjoyed the collective design experience as opposed to the individual maker cultures that is a common reality in designer maker practice and assumed and advanced in most design education. (Fry 2015, p418) While 73.6% agreed to an empowerment by sharing and engaging in collaborative design activities, 31.6% of respondents declared definite reservations in sharing their ideas with a further 26.3% undecided.

This overlap between about a quarter of charrette participants experiencing empowerment through ideas sharing yet having reservations to do so offers insights not just into the behavioural barriers to collaboration for professionals from the design field, but also for the power of the craft or making process to overcome these in practice. Further confirmation of this interpretation can be found in the qualitative data from the survey: Almost four fifth (78.9%) of respondents said the collaborative experience inspired their design process, and three quarters (73.7%) mentioned the inspirational nature of stories and narratives shared by the basket maker as influential to their design process, with almost five sixth (84.2%) of participants mentioning material experimentations as one of the most influential factors in their design process. This was further evident in the answers to the question: What is that one thing you will take away from the charrette today?: Collaborative experience (36.8%) was here closely followed by experimenting with new materials (31.6%), a new skill (21.1%) and other (10.5%). Making related aspects (material and skill) were therefore mentioned by over half (52.7%) of the participants, with just under a third (31.6%) rating collaborative experiences more highly. The results from our charrette therefore shed light on what craft could provide ‘as an approach, an active attitude, and the ways that one goes about thing and [the] ability to challenge perceptions’. (Marchand 2016, pi) The outcomes offer insights to the field of design in that we can see working through material as a bodily practice, a way of problem solving from ‘moment to moment’, (Bunn 2013) proving that ‘design lies in the act of making and in makers in action’ (Bunn 2015, p39). The results promote the idea of sharing with people materials and environments (ibid), showing how craft can be an ‘open system’ (Bunn 2016) and a ‘generative toolkit’ for the design process. Much akin to the aims and objectives of using generative tools to express thoughts, feelings, and ideas (Sanders 2000); the collaborative craft making experience generated narratives, stories and ideas that were driven by material and making.

In order to analyse in more detail the varied approaches to idea generation in our basket making charrette, and to see in which ways teams worked towards design solutions while interacting with people, materials and ideas, we will now compare two of the participating teams. Mapping their activities through our detailed observational notes and video footage should greatly improve our understanding of their entire design process, and demystify the complex interactions between collaborative craft and design.

Comparing two teams

The (self-named) teams “No boundary” and “Krafty Kollektive” were selected on the basis of well legible video and notes based observational data being available on their charrette activity.

The members of the team represented the following backgrounds. (See table 2)

Team No Boundary (NB)	Team Krafty Kollektive (KK)
An academic practitioner in knitting	An academic practitioner in textiles design
Curator, Arts development and management	A designer maker (knitting)
Textiles Weaver (PG Design student)	Fashion designer (PG Design student)
Knitter (PG Design student)	Textiles Weaver (UG student)

Table 2: Team membership

Mapping the design process

The emphasis of the observational note taking had been on key stages and type of knowledge exchange activities, while the video captured all activity during the day. When transcribing conversations, we paid attention to the turns taken by each member, in order to understand dominant discourses as well as dominant roles that emerged within teams. The information and the context of conversations were complex and fragmented as team members at times moved around the room, especially to look for materials and sources of inspirations. We were able to capture these movements and conversations via multiple cameras around the room. As this study is grounded in heritage studies as well as participatory and collaborative design process, a further focus was to understand the interface between heritage and design.

While analysing the data, the researchers documented the stories and narratives as part of transcribing and then looked for how participants' transition from one design stage to the next occurred, and what, how and who guided the direction of the conversation and in what ways. Following the initial analysis of the online survey, two members from each team were approached to further probe their experience of the charrette and to capture in-depth knowledge of their personal experiences in terms of group dynamics. The interviews were useful in filling the gaps in the transcribed data and to triangulate the data sets generated.

Observations and comparisons of the team activities

After the demonstration of basket weaving techniques and materials by the Scottish basket maker all members got back into the teams and further discussed the ideas and material experimentations they had already started. While trying out the demonstrated techniques they simultaneously listened to the short lecture on heritage and design. They then moved on to the designing and making process.

Analysing the team Krafty Kollektive (KK)

Team KK initially approached the design process purely through material experimentation, but soon moved on to understand and utilise the specific background of its members. Collectively, members of the KK team tried to dissect the brief to gauge what it was about:

"...getting inspired from basketry, but it does not mean that we have to make a basket as such, but utilise the materials and anything else that's given. So it doesn't matter what we create at the end right?" (Lindsay)

This led the team towards an open ended approach to designing, while moving away from an object-led design approach from the beginning.

The members decided to refrain from solving a problem, preferring to design an object that has a function which could be utilised for problem solving later. It was after this discussion they brought their focus to 'Heritage'. Some members grappled with the concept of heritage and what it actually meant, but soon their conversations on each other's background suggested the significance of place-based heritage as all of the four members were of Scottish origin. It then directed the conversation towards building relationships with their life transitions in relation to place, and particularly the idea of rural and urban. They soon connected with the idea of 'personal heritage', having lived in large cities as well as growing up and moving back to rural settings. Each member also explained what heritage meant to them in their own discipline, for example:

" In design we tend to not necessarily take heritage like where it stems from , what are the materials or where the traditions come from" (Beth)

The fashion designer contextualised heritage as rustic, rural as a concept harking back to the past as opposed to modernisation:

“I was looking at the traditional rustic founding (sic) and compare it with the stylistic city, anecdote.” (Ruth)

The heritage discourse on place-based, personal heritage, the old and the new, here directed their design process towards representing the ‘Contrast’, ‘Change’ ‘Scale’, ‘Utility’ and ‘Function’ that could represent their transitions and reflect a urban –rural divide.

The next stage of the design process usually requires planning and making (Austin et al. 2001), but a decisive decision was taken by all members to omit the planning stage and move on to the hands-on making as they suggested ‘design alters (sic)’, thus should be informed through spontaneity and experimentation.

Progress towards the eventual team output was in actual fact, however, generated as much through discussion as it was through practical experimentation, as their diverse backgrounds as weavers, knitters and fashion designers led to the idea of designing distinct components/containers or ‘pockets’, that echoed their wish to contrast urban and rural, and addressed desirable futures through multifunctional, multi-purpose and ‘endless uses’:

“But urban to rural we can cover using contrasting materials.... Add something metallic or something that has different feel to it.” (Lindsay)

“Inside moving urban to rural you could carry things in it, not necessarily a basket but you make something that’s like kind of an urban back pack, something contemporary... or do we make something that can transport-that need to be in both environments. So we have like a big bag that’s got an iPad or iPhone and it also has something that you might need for your rural picnic” (Collette)

“Like a tool bag?”(Lindsay)

“So are we making lots of pockets that would become a bag?”(Collette)

“Yeah utility”(Ruth)

“Yeah everybody loves pockets.... If we make a lot of components of things then we can bring it together later.”(Beth)

The tangible outputs of making components of different sizes were then linked back through discussion of Scottish heritage of different consumer goods like tartans, short breads and oat cakes; in their own words ‘cheeky Scottish heritage’. During the making process the team adopted an iterative approach of considering what can be achieved through materials provided, but guided the formation of actual objects equally by conversation on heritage aspects.

Only during the making phase did each team member take an individual approach to designing as they concentrated mainly on their own contribution to the final piece. Observing each other’s designs at this time allowed transforming their individual ideas and skills into a collaborative design process as a whole, and as one member introduced origami folding while another used techniques ‘invented on the spot’, problem solving as a co-creational activity emerged as a key outcome. (See image 2) Throughout these individual stages of their project, and during final assembly of the collaborative output, the team used material explorations, at times supported by the professional basket maker, as the key way to progress their work

When reviewing the dynamics of their own team, the interviewed members reported that they were able to communicate and work well because they displayed a 'like mindedness' to the design process.



Image 2: Team KK transforming their individual ideas and skills into a collaborative design process

Analysing the team No Boundary (NB)

Team NB initially approached their design process by exploring the properties of the materials of rush and willow. Each member tried different ways of coiling and twisting rush and this influenced the other members to explore more of the material possibilities in terms of forming shapes.

The brainstorming and idea generation phase took the longest in their design process as all members collectively tried to visualise how the design could be linked up with the characteristics of materials. Much of the discussions were thus material driven and the project driven objectives also directed their approaches to design. One of the initial decisions for the team members was to 'keep us all busy' and this influenced towards a type of design where everybody's contribution was valued equally as part of a co-creational activity, but also towards a plan on how to divvy up the work.

From the mapping of ideas in the initial stage of the design process, the group members derived key ideas to explore. They debated whether to create a merely aesthetically pleasing object or to incorporate function, and soon the ability to actually make any planned object, and the limitations of the materials became key concerns for further investigation.

"So you have sort of a base of these components rather than actually having sort of vertical things that you could join together (Trying to visualise the object to others)" (Louise)

"Yeah, I think the shape may be dictated by what we made at entry."(Angela)

"Yeah and then you could bring in other sort of materials to see how it joins up and open."(Lindsay)

"Then it kind of go against this? (Showing the mapped ideas)"(Angela)

"No it can't because we don't know what it is yet."(Lila)

"I think you don't know how it's gonna go until you try something."(Angela)

One of the concerns that emerged in the discussions was how to connect the 'open-ended' design possibilities with heritage discourse. When closely observing the entire conversation it is apparent that heritage discourse was always at the periphery in the discussion in Team NB. It was implied that heritage should not be something that needs critical attention, but it would organically develop within the design process as it progresses, irrespective of the fact that the team consisted of participants of multicultural backgrounds. (Scottish x2, American and Brazilian)

"It is possible that it fixes all the elements like culture, heritage, tradition and function and different parts of the world when try it all together. So it integrates all as a component. I think we can then link it to heritage."(Louise)

In the conceptualisation phase of the design process, the team continued to have lengthy discussions around time limitation, availability of materials, characteristics of materials, functionality and the usability of the object. Once the process of idea generation became complex and conflicting, the members soon moved to draw their ideas as 2D sketches. This seemed helpful for the team members to visualise their ideas and develop 3D prototype paper structures. The 2D sketching and 3D prototyping triggered conversations between members as they all considered this process as quite useful in suggesting new possibilities based on developmental sketches.

"I think we kind of have a hybrid approach. Make a plan and then start working on it and then decide to may be revise the plan."(Lindsay)

"It's an interesting process isn't it?"(Louise)

"Yeah, I think it came together nicely." Angela)

This extensive planning of the design allowed team NB to develop making approaches to the design development process that did not yet involve craft materials.

Team NB's understanding of heritage and tradition were largely based on the material culture, specifically with regards to being inspired by natural materials and using traditional Scottish basket weaving techniques. Connecting traditional use of materials to a contemporary design were thought of as a way of connecting the past to the present and the future use of heritage. Being 'planners', as they called themselves, their designs were driven by process:

"So we planned to a certain stage and tried to come up with the most effective and efficient process, how to make in a way that we all felt that we all needed to be making at the same time. And however that might happen. We were also open to being led by what happens along the way... evolving and changing as we go through"(Angela)

The final object they made was a "multi-faceted" and "changeable" receptacle, which can be folded as a container and also used as a wall hanging.(See image 3) In their design process, they were adamant to not use synthetic materials, and wanted to maintain the 'authentic' uses of natural materials. During the process of designing, problem solving was

at the heart of their discussions as one stage would dictate the next stage of the design phase and also iterate. When constructing the petal shapes of their vessel they struggled to find the solution to the base of the vessel but soon decided to move on finishing the petals and then decide how to design the base on the outcome of the petals.

With regard to the group dynamics, 'all team members were equally engaged in every step of the process, every one's opinion seems valued and considered'. (Neutral observer comment) While analysing the video documentary it can be seen that planning dictated their process at an early stage, but it also gave confidence at the execution phase as the members could relate to the possibilities of the outcome. 'Inevitability' created an excitement within the members and this spontaneity was much appreciated by all. All members contributing towards making a single object brought cohesion into the team to keep up with each other and also to communicate more effectively on each attempt they made. It also gave opportunities to explore and bring members' own skills and knowledge of their respective discipline to add value to the design, e.g. when employing knitting as a closure to the vessel.

Team NB also maintained a close relationship with the expert basket maker to review the techniques used to realise their intended design.



Image 3: The changeable and multifaceted receptacle

Limitations of the study

A one day activity only affords participants a limited amount of time to explore the concepts and to get to know each other.

The brief influenced the design process and level of engagement as it directed conversations and enforced a strict time frame.

The materials provided (rush and willow) were challenging to a novice, and only a limited array of techniques was demonstrated to the group to suit a one day activity. Therefore the full potential of basket making was never to be fully realised.

The charrette participants involved a number of design and heritage professionals from several different disciplines. When inviting participants, the researchers did not take into consideration the different participants' prior basket making experiences, knowledge, skills,

and abilities, as it was seen as key to have a viable number of participants for quantitative and comparative observations. Any specific prior knowledge of basket making might have exerted an influence on the outcomes of the charrette, though none became apparent in any of the observational data.

Summary and Conclusion

The charrette experience provided evidence on how variedly multi-disciplinary groups may engage with a collaborative design process centred around craft making. Considering the detailed observational data on Team KK's and Team NB's design processes, it became apparent that vastly different approaches to making and collaboration had been adopted: While the former team spent little time planning the actual design but afforded much space to debating the heritage implications of the brief, the latter was mainly driven by intense initial planning and an iterative approach to design, with less consideration for the heritage aspect. Team KK collaborated intensively on the heritage context provided, and worked largely individually in their material experimentation towards finished objects, while team NB worked more individually in the initial stages as each member explored the material, before entering into a phase of intense collaboration towards the overall design solution.

The survey analysis confirmed that everybody who took part in the charrette enjoyed design by process rather than design towards outcome, and both teams observed here in detail enjoyed the 'spontaneity' of the design process as it delivered a sense of openness and momentum to evolve as they designed. This corresponds to finding the 'serendipitous insights' which Kjaersgaard says enable us to step away from the rational and linear processes to design (Kjaersgaard 2013). The findings from online survey, observations and interviews revealed the 'openness' and 'collectiveness' to the design as highly appreciated and valued. Sharing ideas clearly empowered the design process, although reservations were visible amongst members. It can be noted that even though people enjoyed the charrette they still felt power relations as one of the key barriers for effective engagements and a diminishing factor. Comparing the two groups in this instance; initial discussions and planning of Team NB enabled to resolve their conflicting issues, while Team KK tried to find the commonness to their discussion so that everybody's ideas could be integrated.

Both teams enjoyed the shared ownership of the design outcome, and whether these were several individual components or a single object, all were able to relate and acknowledge the shared aspect. It contributed in creating new communities of practice involving heterogeneous actors now belonging to the 'community' of basket making. It generated networks between seemingly distanced participants like architects, engineers and 'powerful strangers' (Emilson and Hillgren 2014) from academia and curatorial practice who could contribute in terms of education, policy and practice of heritage and design disciplines.

When comparing the different stages of the design process, the most conflicting design activity took place during the idea generation stage. If more discussions and confrontations can be managed and resolved during this stage, co creation activity should become more effective. Reflecting on the overall charrette experience, early stage team agreements are crucial for effective design processes; otherwise we see a knock-on effect on the disintegration of team, and a lack of contribution from one or a number of members.

Charrette's outcomes with regard to heritage production

In light of the findings and contributing to heritage discourse, our observations further confirm 'Heritage' as a constructionist concept (Smith 2006, Smith and Akagawa 2008), so 'not as much as a 'thing', but as a cultural and a social process' using past memories to negotiate new expressions and identities for the future. (Smith 2006, p2)

Especially team KK constructed heritage as what it means to them in terms of values, narratives, beliefs, what materials mean and offer in that very context of production. Heritage was both consumed and produced within the charrette environment; Empathy was not only created between people but also between things and materials: It could be seen as a collective expression between the material and non-material cultures.

As 'like-minded people' are said to form new heritage and develop heritages (Kockel, 2007); the multidisciplinary teams confirmed how heterogeneous actors, who may not necessarily come from that immediate tradition, can effectively contribute to the construction of new heritage. The charrette suggested new approaches for an inclusive industry especially at the craft- design interface, where dissonant and contested ideas were managed effectively through co-creational activities. This is especially useful in craft and design debates, where the challenges of globalisation, global influences and the acknowledgement and acceptance of local and traditional ways of knowing are not yet resolved when design meets craft. (Tunstall 2013) These scenarios require more sustainable ways of engaging, scenarios that are more than participatory and go beyond the narrow interface of a user- producer or user-designer binary. (Blomberg and Karasti 2013) Also in design thinking, scholars encourage an expanded participation by including socio-material assemblies as 'things' within the design process rather than objects as 'things' (Bjögvinsson et al. 2012, Emilson and Hillgren 2014) Therefore the charrette was useful in terms of 'bringing out alternative opportunities', allowing a 'polyphony of voices', and 'mutually vigorous but tolerant disputes' amongst diverse members. (Emilson and Hillgren 2014, p69) This is further useful in the current design climate of creating 'newness-for-the-sake-of-newness' (Papanek 1985 and Fry 2015) and 'design's more is more mentality' (Hunt 2011, p34), and its implications for politically instituted, and much debated designer- artisan interventions. (UNESCO 2005)

The charrette offered insights into the workings of shared heritage (Denes 2012) and a grass-root, community based approach to heritage management (Santos and Müller 2012) which could be developed further by involving different stakeholders. Our experiment confirmed the importance of viewing both tangible (the material culture) and intangible heritage (practices, representation, expression, knowledge and skills) in a holistic manner (Kirshenblatt - Gimblett 2014)^{5,6}. This is relevant for discussions around safeguarding of cultural heritage by involving producers, consumers, policy makers, educators and other contributors. Development of these kinds of participatory models needs future testing on live and realistic projects to fully evaluate its usefulness in grassroots community practices⁷.

Acknowledgements

This work has been funded by the Principal's public engagement fund from Heriot Watt University, Scotland. We would particularly like to thank Liz Balfour from the Scottish Basket Making Circle for sharing her knowledge and enthusiasm with the project. A special thank goes to Alex McLaren from School of Built Environment, Heriot Watt University for co-facilitating the workshop as well as for Sharifa Hawari's contribution as a neutral observer.

⁵ Interestingly, the names chosen by each team prior to embarking on their collaborative experience seem to be in contrast to how they actually approached the task, KK choosing a rather theoretical approach to the task while NB tightly planning the outcomes, but this is worthy of further consideration at another time.

⁶ Kirshenblatt- Gimblett 2014 proposes a holistic approach to culture and heritage by stressing the inextricably bound relationship between tangible and intangible, where material, the embodied knowledge, practices and the social worlds are included.

⁷ Although the Design Charrette experiment was informed through the findings of previous research carried out by the authors in cross-cultural grassroots, community contexts, findings and learnings of this design experiment, need to be applied and further tested for its validity beyond one-off cases.

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