

# scope

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#### Introduction to the Designers and project of 'Wayfaring – Cloth and Coat'

Christine Brimer (CB) interrogates natural fibres, tools, and process, articulating her research findings and experiences in woven cloth by manipulating surface, scale and form. Her work is concerned with journeying, place, and our connection to the natural world. Deb Cumming's (DC) research is aligned with fashion technical design applications that address broader inclusive, social and environmental aspects. Her design practice focuses on alternative pattern design and drape methods. As their first formal design collaboration, Christine and Deb bring together their shared values and approach to sustainable design, integrity of cloth in the craft of weaving and apparel zero waste pattern processes, with reflection of interdisciplinary design and identity explorations. This design project resulted in the creation of a zero-waste one-piece coat hand woven from strong wool and contained in its own bag, a wayfaring carrier of shared and diverse exploration. This project has been about co-design and experimentation through sharing and overlaying respective crafts of making. This has led to innovative methods which enhanced the process, outcome and contributes to future integrated design practice for textile and fashion designers.



Figure 1. 'Cloth and Coat' zero waste one piece design. Photographer: Olivia Melhop.

### What fuelled your design ideas for this co-design project?

DC. This co-design project 'Wayfaring: Cloth & Coat', arose with a mutual respect for our personal connections and design practices, concepts of place and identity, and a focused integration of each other's disciplines in fashion and textiles.

CB. The brief was to conceptually articulate a story of connection through journey – for DC. This meant learning more of her family migration from Shetland to Aotearoa. I don't have a family affiliation to Shetland. However, as with earlier textile research projects, coastline and wild landscapes inspire and fulfil a desire in myself for belonging and connection.

DC. I've been fascinated by the beauty of apparel one-piece pattern shapes but also the technical thinking and application for sustainable possibilities, with potential reduction of fabric waste and manufacture bringing together innovative apparel and textile processes. Traditionally within the fashion design processes there are often too many segregated, sequential processes of production – drawings, patterns, fabric selection and construction. To solve some of the fashion and textile waste issues and to innovate, there is a need for greater understanding of how these disciplines can connect and overlay knowledge and technologies.

CB. Having studied and worked in both science and design I see a huge overlap in methodologies and ideation with the key skills of curiosity and observation, and a drive and tenacity to identify and resolve problems and communicate complexity. Through an iterative design methodology, researching and executing weave experiments to resolve new cloth is like finding a new vocabulary and metaphor that helps me clarify my thoughts and literally make sense of the world around me.

### Who are the practitioners who you feel have influenced your design processes?

CB. I am inspired by designers who identify new material potentials or innovate with process or tools. I subscribe to *Material Matters*, a podcast hosted by Grant Gibson who interviews design thinkers and practitioners who integrate materials, processes and systems across a range of mediums. I read a lot about walking and journeying, the natural world and the human experience of landscape (Tim Creswell, Robert MacFarlane, Gaston Bachelard, Yi Fu Tuan). Patricia Grace poignantly conveys a sense of belonging and place in her writing. My thinking is informed by visual artists concerned with themes of belonging and dislocation, and sculptural and architectural works that explore our relationship with space and place. Weavers I admire innovate by pushing processes and tools and the conventions of woven cloth beyond the status quo. They are the Wayfinders, working at the fringes. Weavers such as Kay Sekimachi manipulate fibre and innovate with the tools of knowledge, experience and their hands, developing an intimate relationship with materials to solve problems and create beautiful forms. In Aotearoa, weavers developed innovations such as kākahu with shoulder shaping woven into the cloth, and the functional elements incorporated into Te Ra, the 200-year-old woven harakeke voyaging waka sail. Loom weavers Peter Collingwood, Annie Albers, Ann Sutton, Laura Thomas and Molly Haynes inspire me with their tenacity, skill and originality.

DC. There are many who have inspired me from the design field! I do have admiration of practitioners who place 'process' at the forefront of their work for example Genevieve Sevin-Doering, Madeleine Vionnet, Holly McQuillan and Rickard Lindquist, amongst others who consider patterns and the body as their focus of attention.



### How do you describe the rangahau|research that you do as part of your design process?

CB and DC. We both find secondary, and practice based technical design research (ongoing building of material and process knowledge) essential to support our design aims and thinking to address issues and practical application. Research in the form of iterative design (sampling, critique and editing) underpins our practice, a way of reflective and generative design thinking and working. In this project, there was initial collating of research sources including historical, place and identity, craft and hand-mediated text references, family objects and visual photographic analysis along with informal interviews and storytelling. In collaborative projects like this, there are continual reflective exchanges to lead and alter the iterative research practice. For both of us, the technical design research in this project was focused on the integrity of woven cloth and apparel zero-waste pattern processes.

CB. Tackling technical frontiers or applying conventional techniques in new contexts to resolve new ways of working with yarns on a loom, enables me to articulate my experiences and research.

### What is most meaningful stage of designing for you and what happens at that moment?

DC. The most meaningful stage is the process; problem-solving when draping the fabric on the body, especially when the technical design aims have sustainable incentives or to improve the wearer experience. Recent design projects with inclusive user-centred design aims have been incredibly meaningful and gratifying in working alongside others to support their needs. I smile a lot.

### What is the most enjoyable part of designing for you?


CB. (it's hard to separate enjoyable from meaningful). What excites me most is pushing process and tools to resolve new techniques to add to the vocabulary of woven cloth. Ideas can be expressed in new ways or with more nuance or clarity, especially if form and texture are important design elements. I call it The Crunchy Thinking!!!

### What 2D / 3D methods or techniques do you use to explore ideas?

DC. I have described some of the initial sources above for the contextual research. But designing for me is with the hands, when draping the fabric on the body. Usually, the process informs the design. It is the drape that I love the most, purely because it allows a 3D design development as an act of creation/sculpture in a relationship to the fabric and the body.

In this project, visual references and metaphorical references were reflected upon and translated through draping, while at the same time exploring technical solutions to improve the one-piece zero waste processes with fabric development. For example, in this design project the one-piece silhouette conveyed the concept of the 'journeyer' and elements of historical imagery of Shetland women and dress, garment layering, scarves enveloping the head, *kishie* carriers/ baskets worn on their backs, *maakin* knitting belts wrapping the waist while walking. In the 3D drape toile process, a rectangular piece of fabric was wrapped from the back lengthwise grain round the shoulder to the front which shifted to the bias. Here is always the unpredictability that is the most enjoyable, how the shape will evolve responding to the grainline, in this case a





softer malleable drape. The front neckline was partially cut leaving the back neck to eventually form folds for a hood or carrier bag. Two lines are cut from the perimeter to back and lower front arm points, to release fabric to be brought around to the lower front from the back. This remained on the straight grain and the line moving around the dropped waist simultaneously creates internal triangular folds to allow a pocket in one piece. The fabric partially released from the arm axis points is rotated to join a spiral sleeve to the armhole, maintaining the lower armhole in one with the body. On reflection of this process, it became a metaphor for the journey or wayfaring, the strong warp at back was indicative of the beginnings, the known certainties of land and life, as the fabric shifted to the bias front, the responses are unpredictable, risks are taken. The shape continues to overlap and settle, doubled in strength (or resilience) forming a new front which is displaced yet stronger at the resulting place of journey. The act of using one piece of fabric with minimal cutlines creates a new shape with no waste and opportunities for reuse, redesign, remake. I love the process – not just for the design outcome but the drape pattern shape and problem solving with a textile designer. We needed to communicate with miniature paper models of pattern and drape, using scaled dimensions with cuts, pivots and folds moving between 2D to 3D to understand the shapes and demands for the fabric weave; textural and weight changes, functional finish lines and turning points, and eyelets integral within the weave. In this project, sequential processes of production – drawings, patterns, fabric selection and construction were disregarded to integrate a stronger relationship between woven fabric and garment. Production communications of garment and fabric notations were overlaid for the weave production and garment construction eliminating many of the usual conventions. The final pattern comprised a fabric dimension 240cm x 140 cm rectangle with minimal openings from the perimeter to woven internal points, measures being derived from body and arm curvature and loom parameters.

CB. Primary research is mostly experiential; observing the natural world with all senses engaged, and the physical act of model making, all to experience form, proximity and space through my body and hands. And then the words come... which are then translated into design elements of scale, form, proximity, negative space and composition. I need to think about form and space in another context or process before I try and emulate in cloth. Then at the loom interacting with a material and experiencing the physics of a tool or process become more vital than visual imagery as the sampling and editing process develops. I have had strict criteria for the yarns I use (undyed, natural fibre, if wool – strong undyed, grown and processed entirely in Aotearoa) so I have developed an intimacy with a small materials palette and become well acquainted with their character and constraints. This fluency enables me to push process and hack tools to explore new potentials and enables innovation. In this design project, recordings of place led us to consider the harbour entrance lighthouse – imagining a lighthouse beam as the migrants' last connection with Shetland, and perhaps the first encounter with their new home. A poignant moment was reading that both the Bressay light in the port of Lerwick, and the original Pencarrow light (now replaced by the Baring Head light) were built in 1858. The lighthouse flash sequences generated ideas for the plaid in the cloth; Baring Head light with a sequence of nine seconds on, six seconds off, and The Bressay light, two quick flashes every twenty seconds. As a natural colourant for the light flashes, gorse flowers were collected from two headlands in Te Whanganui a Tara. Anna Gratton's 110 TEX natural cream Corriedale yarn was used as the warp, with a proportion dyed with gorse collected from Baring Head. For the weft Bressay sequence, Gratton's 240 TEX Corriedale was dyed using gorse collected from the

Southern Walkway above Lerwick Terrace, close to my home. Early weave sampling included twills and structures with floats to reference textural elements, but plain balanced weave best satisfied performance requirements for cut and drape, and interplay of colour patterning. This structure also maximised off-loom cloth width to explore volume and drape. The one-piece method was reflected upon as we interchanged our respective processes. Miniature paper shapes helped the pattern and garment translations between us. With a full-scale pattern and toile there were many reflections on how the weave and garment construction could become integral to strengthen each other. The challenges were highlighted such as the fabric weakness for the 180-270 degree turns of endpoints/ cuts demanded by the draping. I considered functional moments in the cloth that could assist in enabling the coat to be cut and formed with integrity and minimise or eliminate sewing and extra interventions in the cloth. These design interventions evolved from exploring long established hand mediated weave technologies. Long vertical openings are used in many handwoven garments to give integrity by building internal selvedge. Such openings were incorporated in the body of the cloth. I became cognizant that a small amount of slit tapestry technique could offer a self-healed stable moment in the cloth to act as an axis point. It acts as a waypoint; a point of certainty like a lighthouse, a star, or navigational chart position. This was further explored as a potential to build a row of 52 stable eyelets. Two rows of eyelets gave a soft fold for the edge of the hood, a strong double row of gathering eyelets, and the edge hidden inside, also eliminating fusing. Loom waste felted wool was used for the cords that ran through the eyelets. I developed a novel leno variation that more closely references the knitted lace so important for women in Shetland. These functional and aesthetic features for the garment design were mapped out to guide placement while weaving and served as a means of communicating design iterations.

### How do you select or adapt your environment to best suit your modes of designing?

CB. South Coast Wellington Aotearoa continues to be a shared place of lived experience for design research for both of us. When working on this project, walking on the coastal hills and being at sea looking at the land (and sky) from another lens, feeling distance, apprehension and anticipation, is like the co-design process; seeing an idea or problem from another point of view and an opportunity to get out of one silo. I get outside, I walk and observe and feel movement in space, both as research as described above, and as a means of clarifying and honing thought, both conceptual and technical. Being AWAY from my loom has become as important as being AT my loom. I often work at night; I'm a terrible sleeper. I need concentrated time to process ideas and process but also time away to rest and reflect and recharge. My physical workspace is quite chaotic as I need to see what is in front of me; lots of samples and my entire studio becomes my "mood board". I work on many different looms from small back strap heddle looms to lever controlled shaft looms (4 to 16 shafts) and a 24 shaft Compu dobby loom; different ideas and experiences come with these different technologies... weaving is haptic, proprioception.... my hands, my body, my eyes, my head, proximity and movement in relation to the yarns and to the cloth as it builds. For this project, the woven bands were made while sailing towards Baring Head light – a strange experience, making during continuous movement through space and time. An object begins in one time and space, is completed in another time and space. Warp dominated bands are strong, functional, elegant. An ancient and ingenious technology still widely practiced because it is portable, cheap to make, and in partnership with



an attentive weaver can be tuned to make beautiful cloth. The belts were a reference to the *maakin* belt waist straps and serve to hold the tension and load of the back carrier bag while walking.

DC. There is much design thinking and reflection while walking the coast and bush where I live on the other side of the harbour. I usually do design research / practice work at home at nights and weekends (I take over spare room or more often living space with dress form, table and machine). This gives the chance to totally focus and for time to escape me. In this collaborative project, there were many shared discussions and sharing of samples and developments in the studio. Our timing revolved around what was happening in our lives – a contrast to the other design research contract work with set deadlines.

### **What role does working with others and collaboration have in your designing?**

DC. Simply put, collaboration is the enjoyment and the greatest source of learning when designing for and with others. I always find it useful to make sure we have shared values or aims from the beginning, and ensure there is respect of each other's design thinking, perspectives and practice, with continual reflective moments to inform iterative developments.

CB. As a sole practitioner generally my design briefs are self-generated. Collaboration and co-design enables me to APPLY my design methodology to new realms, either a practical or more esoteric problem to solve or communicate. When the brief presents me with problems that I can solve through integrating materiality, process and tools, and the research outcomes make sense to another person, I feel useful and connected. This co-design project aligned with my research interests and effectively presented a brief to ideate and develop techniques and to work poetically to tell a story through cloth and garment. This project was an opportunity to think about employing "standardised" weave techniques and adapt them to suit a new context and application to address a situation that I wouldn't have encountered without collaboration. Co-design offers a wider reach, stepping out of a silo and gaining insights into the realms and audience of the other designer. Before this project almost all my work had been focused on interior applications. Working in collaboration, I extended my knowledge of research methods and gained some insights into Deb's specialty of one piece and zero waste pattern and drape, and the relationship of woven fabric and the body.

### **As tangata whenua or tangata Tiriti, how do you practice in our Aotearoa New Zealand framework; how is this reflected in your work?**

DC. To begin research into my family's Shetland connections of which I knew very little, secondary research and delving into family history triggered thoughts around identity, connections and my sense of place here in Aotearoa. Through design practice, there has been much reflection through sharing and making.

CB. During this past year, I have begun to actively research and be open to encounters that are filling an emotional and knowledge void created by a sudden dislocation five generations ago in my connection with my whakapapa.... so, exploring the relationships between land and water, tangata whenua and tangata Tiriti, place and journey, has been both poignant and timely.

DC and CB. The photo imagery in this design project helps to portray the sense of place, and use of local resources to create adaptation for the new, yet there is a resonance with where we

have come from. We are both pleased that this project outcome exudes integrity and quality in the woven wool cloth and the functional design with connection and experimentation through sharing our respective crafts. There are now many more questions for us from the connections through making. The cloth and coat is contained in its own bag, a wayfaring carrier now with design and personal meaning of shared and diverse exploration.

*Do you have sources of inspiration that you always revisit?*

CB and DC. Our relationship with land and the natural world. Themes of belonging and the experience of a shared humanity.



**Associate Professor Deb Cumming** (BSc Psychology, University of Canterbury, MDes (Fashion), College of Creative Arts, Massey University). Deb Cumming is a fashion design researcher and academic at Massey University with teaching in undergraduate and postgraduate design supervision. Her research is aligned with fashion practise with a focus on technical design applications that address broader inclusive, social and environmental aspects.

**Christine Brimer** (BSc (Hons) Plant Physiology, University of Canterbury BDes (Hons) (Textile Design), College of Creative Arts, Massey University) Christine interrogates natural fibres, tools, and process, articulating her research findings and experiences in woven cloth by manipulating surface, scale and form. Her work is concerned with journeying, place, and our connection to the natural world, and is informed by earlier studies in plant science, working with people from refugee backgrounds, and ocean voyages.