Rosanna Leonor Vibe

MFA Medium and Material-based Art
Art and Craft department • Oslo National Academy of the Arts
May 2022

Negotiation of Forces

Thank you for your support -
Franz Schmidt, Line Ulekleiv, Sara Yazdani, Ebba Moi, Tina Jonsbu,
and Kristina Hernandez

Weaving involves an understanding of the movement of threads in space. In the deceivingly simple relationship between over and under, the threads mutually lock each other into coherence. They expand from single, easily breakable filaments to a mesh of combined strength with an enhanced ability to withstand, protect, soften, and comfort.

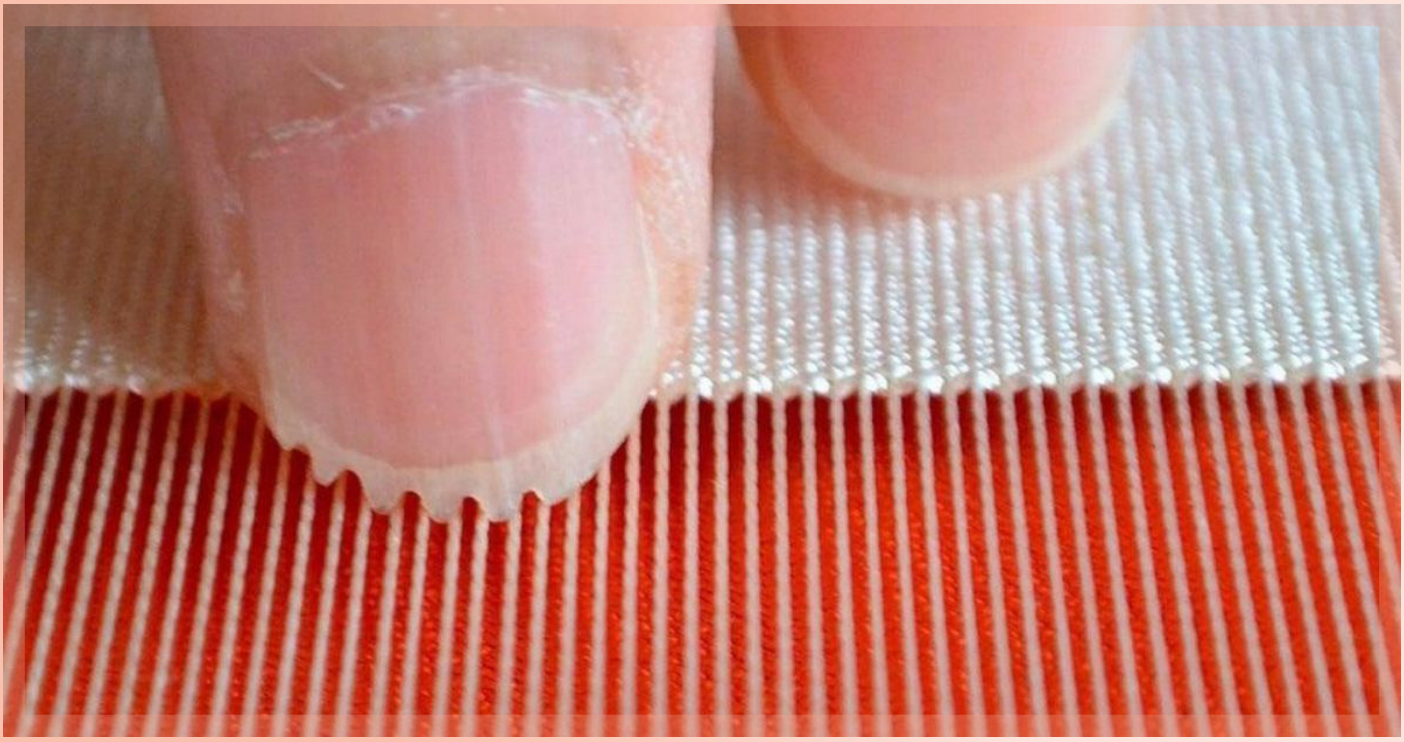
I start by setting up the horizontal framework, the warp. I unwind individual cones of spooled thread systematically into precise lengths, passing them in their entirety through my right hand. Concentrating and controlling my posture to keep an even tension, I prime the fibers over the skin on my palms, lubricating the silk threads with my natural oil and sweat as the warp accumulates. I break off the thread on the side of my right hand, feeling the sting in the groove that has emerged in my flesh from consistently using the same finger for this purpose. I then tie and braid bundles of lengths together, ready for the dyepot. During the dyeing of the yarn, I imagine that on a molecular level, my preliminary corporeal priming of the fibers intermingles with the pigments that adhere to the material. Although I try to avoid it, I am likely to expose myself to the dyeing chemicals, opportunistically absorbed into my body when I let them in (by forgetting my gloves - the skin on my hands suffers). The stains from the color pigment easily extend their presence onto my skin and clothes. I stretch the colored warp and hang it to dry. It is arranged in a cross pattern which allows each strand to be distinguished from the mass. At the loom, each individual thread is settled in its allotted space through vertical string structures, suspended on rectangular shafts, which keep them organized in consecutive order. Then they are fastened and wound into tension. Pulled taught, they transform from disordered, delicate filaments, which would normally tend toward entanglement, into rigid alignment. My feet can now raise and lower the shafts, inducing alternate warp strings to rise and fall. Inserting a horizontal weft thread locks their positions, a fraction of material at a time, in alternate frozen states inching forward. The material grows steadily. Weaving for many hours makes my arms ache, and my lower back feels the strain of maintaining my balanced pose. Fragments of fibers are released into the air as I work, accumulating in my lungs – I find them in my shoes, clothes and around my apartment, following me like an aura. The threads disseminate their particles throughout my life. My vision has changed, and I see weaving everywhere, noticing thread count, material, and technique.

I participate in this collaborative structure, a transaction between potential states of physical materiality, installed between my body, my tools and materials.

Introduction: A negotiation of forces

Although textiles have been an essential component of my artistic research for years, my introduction to the craft of weaving coincides with my master studies of the last couple of years. As a recently possessed weaver, I have found myself thoroughly absorbed into the negotiation of forces, the tensions that are in play, in the acts of dyeing and weaving fibers. I have built my thesis research around emphasizing these tensions in the relationship between my body, my tools (like the loom and the dyebath) and my materials (the fiber, the pigment). I am captivated by the ways we can mutually adapt to each other in the process of generating a soft and pliable artifact.

In searching weaving practices for crumbs that could lead me down the right path, I looked for the many ways bodies could physically adapt to a craft. I came across the nails of the *tsuzure-ori* weavers. In this thousand-year old Japanese technique, weavers occasionally file down their nails into serrated points, to be able to use them to beat down the subtlest threads in their almost water-color like compositions. Their hands are clearly and somewhat aggressively adapted to their work, in a very direct relationship characterized by need and convenience. The modifying of a body part into a specialized tool to facilitate a generative practice like this is an example of mutual reciprocity. Such examples, though perhaps not as immediately obvious, exist elsewhere in various practices of weaving and dyeing, as it does in all forms of making. The potential to allow these forces a greater range of visibility is what I have wished to explore in my research.



A nail filed into serrated points for use in Tsuzure-ori weaving.

Image from www.omuro-sohachi.com.

The terrain these ideas have emerged from: What precedes

My art practice has always revolved around performative exchanges between the body and its surroundings, through interactive, and usually textile, projects. Before I became a weaver, the work would unfold as flexible nests or caves that created immersion and sensuous impact, an attempt to facilitate a visceral connection through a pool of material. I would sew or otherwise compose various materials, like textiles and paper, into large, moldable compositions. Physically, what affected me affected my work: I made body bags, sheaths and piles, to sleep in, to wash with, to surround myself with. Often, the work was temporary, with undefined borders, and for an indeterminate or non-existing audience – a private, although documented, performance for one.

Mutuality has always been important. When making formal decisions, shapes and structures would develop out of the necessity to adapt to neighboring ones, be it around my body or along a length of cloth. Sewing together sheaths of material, the edge of one piece would pull along its partner, causing cooperative deformation. Like the sculpting relationship between a landscape and steady forces of erosion, uneven resistance would define the final shape, the way the ice that erodes must follow the shape of the crack in the stone, and the crack must widen in response to the ice. The work would form me as I formed it, and we would both soften to accommodate each other. One force may have been stronger, or we may have mutually yielded. The content would fit the vessel, but what was vessel and what was content was not static, rather shifting, with continual exchange between the two.

Previous work
Visceral connections through a pool of material.

Rosanna Vibe. *Fragments.* 2017.

Film still from performative experiments with textile fragments
in my studio, bedroom and bath.

Photo: Kristina Hernandez

Previous work
Adapting to neighboring structures.

Rosanna Vibe. *I settle in the room and the room settles in me.* 2016.

Performative installation in artist residency Haishakkei, Ibaraki, Japan.
Inspired by an allergic reaction to a dusty old artist residency house full of mosquitoes, I constructed a material counterreaction and documented a sleep performance inside the structure.

Installed in a 180 x 180 x 180 cm tatami mat tea-room.

Shifting material relationships

Central to my research has been the principle that the body must inevitably relate to its environment, and that the constant flow of matter between these two muddles the boundary between form and content. The location of the supposed border that outlines the individual, dividing the inherent from the external, is a constantly renegotiating frontier. I am generally fascinated by such permeability, and the various ways in which physical matter travels, merges, and groups in discrete accumulations in space. Notions of the existence of the very concepts of an ‘inside’ and an ‘outside’, ‘self’ and ‘other’, are rocked by the constant shifting of matter between these linguistic distinctions, and make unclear the persistent divisions we cling to for organization.

Imagining processes of digestion can be one potential avenue to help concretize the diffuse interrelations of the physical body with our surroundings. Digesting a piece of food seems to illustrate a straightforward path from the outside in, with clear delineations. We take up nutrients from our environment, break them down internally from the moment they enter our mouths, eventually reconstituting and fusing with them. However, the medical view of the body's outer surface includes the gullet, the mouth and stomach cavity, and the intestinal lining; only when nutrients cross the bloodstream barrier are they said to be within the body. Thus the food glides over our external surfaces for most of the breakdown process, an *outside* occurrence. Questions may also arise regarding at what point a piece of food, incorporated, can be labeled body, and what point it is labeled refuse during the process of being expelled. Despite its perceived movement from the outside in, perhaps we can imagine matter undivided? Without labels like food and body, a piece of bread can be relabeled as a potential body component, as of yet just hovering a little further away. Like that uncatchable, squishy, liquid filled reversible toy that endlessly turns itself inside out, our external and so-called internal surfaces are a mobius loop in constant connection. I used to dream of an apple in a similar way, with flesh and peel reversed: a thick, waxy fruit center, covered by a thin outer layer of juicy, vulnerable flesh rind. What is inside and what is outside can be relative. There are many ways to organize and imagine matter, to digest, to reconstitute, to grow together – also with unexpected materials.

Accepting the distinctions as wavering may go further in encouraging real and delicious immersion into the material world.

This illusory relationship, between form and content, continues to be a central component in my project. I am currently exploring this through a weaving practice that deliberately seeks to blur the boundaries between the two, trying to perforate the idea of an impermeable surface. I will describe this project in greater detail in the following pages.

An example of a more ‘superficial’, textile-sediment approach from my previous work.

Rosanna Vibe. *Untitled (on my sofa during pandemic)*. 2020.
Embroidery on towel fabric, factory woven and dyed.

Photo: Kristina Hernandez

Why textile? As an extended, woven body

I realize that up to now my practice has been a relatively ‘superficial’ form of immersion. This is illustrated in previous work by actions like piling layers of textile sediment on top of myself – which I have had a limited role in manipulating – bound to previously existing, machine made colors or qualities, and never fully delving into the material's provenance (see image on previous page). They may have been inspired visually, for example, by the elaborate folds of intestinal linings, but they didn’t go far enough in terms of my project to facilitate a deeper dive, when the material itself came from a disembodied roll of fabric in a store. I had a limited connection at the time to the inherent qualities and the possibilities of variety that affect the behavior and presence of a woven piece of material. Since textiles are so ubiquitous and extraordinarily common, they are easily taken for granted, destined as they are for the wearily growing mountain ranges of overproduced material in landfills. Their generation is specialized, complex and unavailable except to those involved in their industrial or manual manufacture. Machines have indeed taken over the bulk of their production, yet some of us can insist on learning and embodying the craft techniques. I feel connected to the urgency of the textile when I can appreciate its generative process and its indispensability in human survival. I think I can go deeper.

To achieve this, I am working to gain as much as possible of the immersive, haptic experience of what it means *to weave*. Following the material from a state of threads to a solid piece of flexible surface is an educative practice. It allows me to question the fundamental aspects of making and what our actual roles are, our limits and possibilities, in relation to a woven piece. It has revealed honest and relevant questions about our relationship. I believe it also has the potential to reveal wider questions about how we interact with our surroundings, perhaps helping us reach a more inclusive acknowledgement of the uncredited forces that shape any material-based practice.

I chose textile before, and continue to do so, because of its capability for intimacy with the body. Textiles are intrinsically involved in our everyday experiences through material such as clothes,

towels, carpets, sheets and kitchen rags. It can transport scent, warmth and presence, or blot moisture from skin. Like the baroquely folded intestinal lining, It can act like an intermediary membrane connecting internal physicality with the outside world, reflecting encounters with various contaminants.

To go further, I must consider where we have the potential to blur together, and highlight the points of tension. This is instrumental to access the core of what it means to mutually adapt to what I am working with.Through weaving, I experiment with this in mind, aiming to describe some areas of interesting friction. How has weaving changed me, physically? How have I taken it up, into my body? How do I change the weaving, the tools? It seems logical to become more profoundly involved in the generation of this permeable mediums' materiality, as deeply as it is involved in mine.

Textiles are a medium, a technology

Theorist Marshall McLuhan presents an interpretation of the textile (through clothing) as extension of the body in his text *Understanding Media* (1964). His wide and fluid definition of media includes any technological advancement as *prostheses* that extend the body. The TV extends our eyes, allowing us to see further and wider, the bicycle extends our legs, allowing us to travel faster and more efficiently, and so on. Bodily mechanics are enhanced by technological development, helpful collaborations with the non-human. What kind of extension of the senses can I create through the generation of textiles? McLuhan writes:

> Clothing, as an extension of the skin, can be seen both as a heat-control mechanism and as a means of defining the self socially. In these respects, clothing and housing are near twins, though clothing is both nearer and elder; for housing extends the inner heat-control mechanisms of our organism, while clothing is a more direct extension of the outer surface of the body.[1]

[1]Marshall MacLuhan. *Understanding Media: The Extensions of Man* (Cambridge, MA: Massachusetts Institute of Technology, 1964, 1994), 119.

Both clothing and housing are framed as successive technologies to harness warmth. It is thoroughly impossible to survive without the textile wrappings of our bodies that provide shelter and comfort for our inadequate physical circumstances. There seems to be an immediacy in textiles, and in the fact that this successful piece of engineering has been around (almost) as long as humans have existed.

Textiles are a way to adapt the body to the unpleasant and uncomfortable reality of a harsh climate. The hard surfaces of architecture and furniture need softening too. Immersing ourselves in textile *prostheses* – a rug on the floor – a blanket – a bed – a jacket – adds cushion, warmth and flexibility to the body's relatively rigid and impractical nudity. It allows me to mold into a perfect fit between sofa cushions, sweaters and blankets, my current arrangement as I write these words. If I were to somehow extract myself from this textile heap without ruining the sculptural form I am wrapped in, you would see an accurate negative imprint of my bodily presence. McLuhan continues with the comparison of clothing and housing:

> If clothing is an extension of our private skins to store and channel our own heat and energy, housing is a collective means of achieving the same end for the family or the group. Housing as shelter is an extension of our bodily heat-control mechanisms—a collective skin or garment. Cities are an even further extension of bodily organs to accommodate the needs of large groups.[2]

The image of clothing as shelter, and that shelter further extending seamlessly into housing, and all as super-extension of 'collective skin', provides nourishment to my search for the amorphous substances and situations that reveal our inextricable unions with each other. I aspire to such a 'collective skin', a skin shared between myself, my tools, and the threads I use to weave, a consolidated and unending substance.

Just as the textile can be an intermediary membrane soaking up matter from the immediate inside of the body to the immediate outside (a sweat stain under the arm of a t-shirt, a blood stain under a cotton bandage), the textile intermediary membrane can spread to facilitate connection to our wider surroundings and provide shelter (from the subway seat cover, to the carpeted hallway, to the 8-person tent).

---

[2] McLuhan. *Understanding Media,* 123.

Structural connections – weaving as growth

The anthropologist Tim Ingold writes about weaving in his collection of essays *The Perception of the Environment* (2000). For Ingold, the act of making artifacts of any kind, but particularly the generative act of weaving, can be reframed easily as a process of growth, equal to that of the organic growth of organisms. He argues that a woven piece is not 'made' in the sense of a purely mental design exercise, exclusively by human intellect; it 'grows' in collaboration with the material, process and craftsman.

> Just as organic form is generated in the unfolding of the morphogenetic field, so the form of the artifact evolves within what I have called a field of forces. Both kinds of field cut across the developing interface between the object (organism or artifact) and an environment which, in the case of the artifact, critically includes its 'maker'. Where the organism engages its environment in the process of ontogenetic development, the artifact engages its maker in a pattern of skilled activity. These are truly creative engagements, in the sense that they actually give rise to the real-world artefactual and organic forms that we encounter, rather than serving – as the standard view would claim – to transcribe pre-existent form onto raw material.[3]

The description of the artifact as *engaging its maker in a pattern of skilled activity* in the making of an environment of generative processes resonates strongly with the intentions of my project. I have set out to build a system that makes explicit the consequences of this, how the artifact (the material, the tool, etc.) exudes its force on me as I exude my force on it – a mutual engagement. As Ingold says – *the form unfolds within a kind of force field, in which the weaver is caught up in a reciprocal and quite muscular dialogue with the material.*[4] I am just one of many forces complicit in this generative practice. Some others include the tension of a particular thread's makeup – the cellular constitution of the plant or animal's fiber, or the structure of a synthetic one – the temperature, weather and climate – how have the threads been stored? How old are

[3] Tim Ingold. "On Weaving a Basket." Essay. In *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*, 339–48. Routledge, 2000, 345.
[4] Ingold. *The Perception of the Environment*, 342.

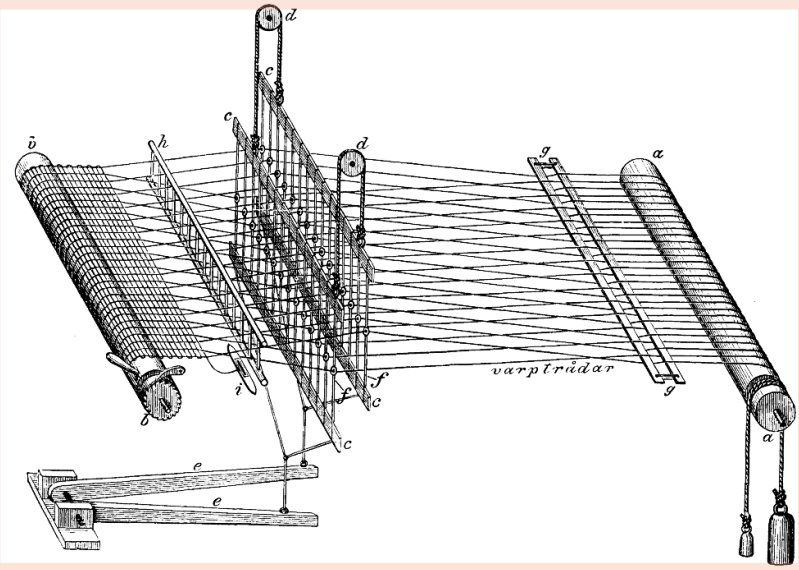
they? Will they snap as I crawl my way forward, weaving millimeter by millimeter, trying in vain to work with materials stored in the school’s yarn cupboard since the 90’s? Yes. Factors like the dimensions of my tools and the hardness of the floor I sit on will affect the size of the weaving and how long I can stand to work. How much discipline do I possess, to keep going?

From my position in this breeding ground, I consider ways to (successfully or unsuccessfully) morph more deliberately into my work, providing opportunities to exaggerate our overlap.

Generating *reciprocal muscular dialogue* into bands of silk

I started my relationship with weaving in the fall of 2020 using a half-manual, half-digital floor loom with computer-controlled shafts, operated by a single pedal. This was an odd introduction perhaps, and as I have advanced in my weaving knowledge, the enigmatic complexity of the floor loom has gradually been revealed to me. The interplay of tensions at the core of these intimidating structures are (contrary to appearances) satisfyingly simple, despite features like digitally controlled shafts and thousands of threads that must find their individual place in sophisticated conformity. I wanted to allow the basic forces more visibility.

Illustration of the mechanics of a floor loom from *Nordisk familjebok* (1922).



A combined manual-digital Toika floor loom during the process of installing the vertical warp threads, and shown during weaving in tension. Enough tension for weaving is ensured by a self-contained heavy frame, with rotating beams on both ends of the loom which are loosened and tightened to advance the warp.

With a view to allow reciprocity, I wanted to feel the strain of the tension on a muscular plane. Seeking a way to place my body more directly into the field of forces Ingold describes, I put together a backstrap loom. Evidence of this ancient weaving system can be traced as far back as the bronze-iron age. This is one of the simplest technologies for complex weaving, consisting of only sticks and thread and anchored with a belt around the weavers waist. Unlike the modern floor loom, which is a large, imposing and static frame to hold the necessary tension to weave, the backstrap loom relies on the body's weight and a fixed counterpoint or counterweight for tension. This means that the setup is only functional with a body inside it. As soon as one steps out of the belt, the tension is lost and the threads seek back to disorganization. Stepping back into the system, advancing the warp as one weaves, and any subtle movement thus becomes a negotiation between the fibers strength, gravity, the counterweights and one’s own bodyweight. The whole system easily snaps or crashes melodramatically to the ground if one is not in tune with all the components. The forces engaged are violent. It is a physically involved form of weaving that allows one to struggle against a stubborn material will. By removing supportive structures and replacing them with muscular resistance, it becomes a more receptive bodily extension (a *prosthesis*, in McLuhan’s words) than the comparatively independent floor loom. It is also a clear example of Ingold's image of the *reciprocal muscular dialogue*.

I quickly experienced how this setup also allows a greater variety of positioning of the weft (horizontal movement of the thread). In the floor loom, the option is primarily straight lines due to the architecture of the tool. The backstrap system means you beat each thread in the loom into place with a hand held tool, which easily allows for shifting diagonals following the weaver's varying gestures. Positioning the body one way, and then another, allows the fabric to grow like ripples in water, echoing the presence of the gestures that have occurred. The result is sensitive to state of mind, posture, and whim, to a greater degree than the static floor loom.

Early versions of the project on my backstrap loom.

December 2021

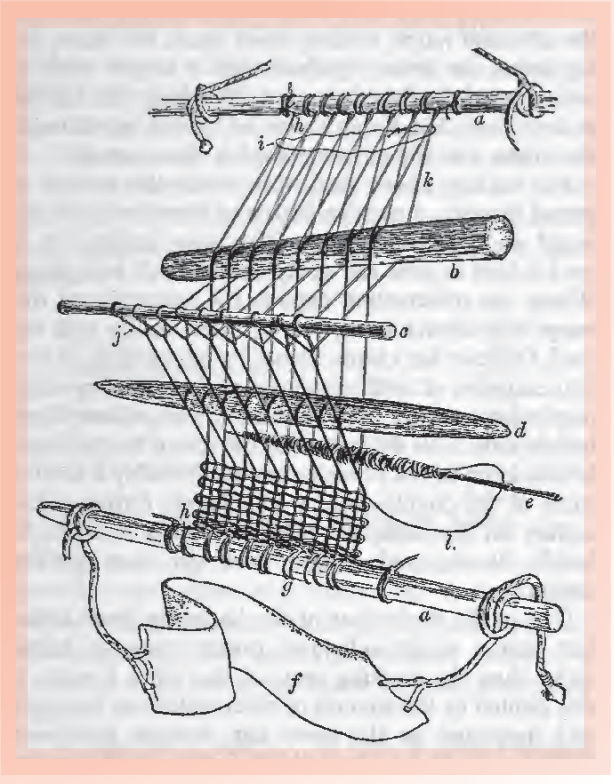


Diagram of an Andean backstrap loom,
a piece of technology traced back to the iron age.

Illustration from Bennett and Bird,
Andean Culture History (1964).

‘Ripples’ in the silk bands.
Deliberate structural ‘imperfections’ become reminiscent of the whorls in a fingerprint or knots in wooden planks.

March-April 2022

The traditional backstrap system functioned relatively well with coarser, woolen bands. I ran into technical difficulties, however, with this simplest of versions, when I found I wanted to use a finer silk with a higher thread count. A finer quality produces a more uniform woven substance, where it becomes more challenging to separate the warp from the weft, form from content. I made versions of my loom using a rigid heddle and backstrap combination, but kept meeting technical obstacles, struggling to get even tension. Wishing for certain ways I wanted the material to organize itself in space, the next logical step was to work with weaving shafts like the floor looms are equipped with, while still combining the setup with a flexible and bodily-dependant backstrap system. In the original backstrap setup, I had to use my hands to change the shed[5]. I realized of course, I could make use of my feet – as other weaving systems do, and as they have done throughout history.

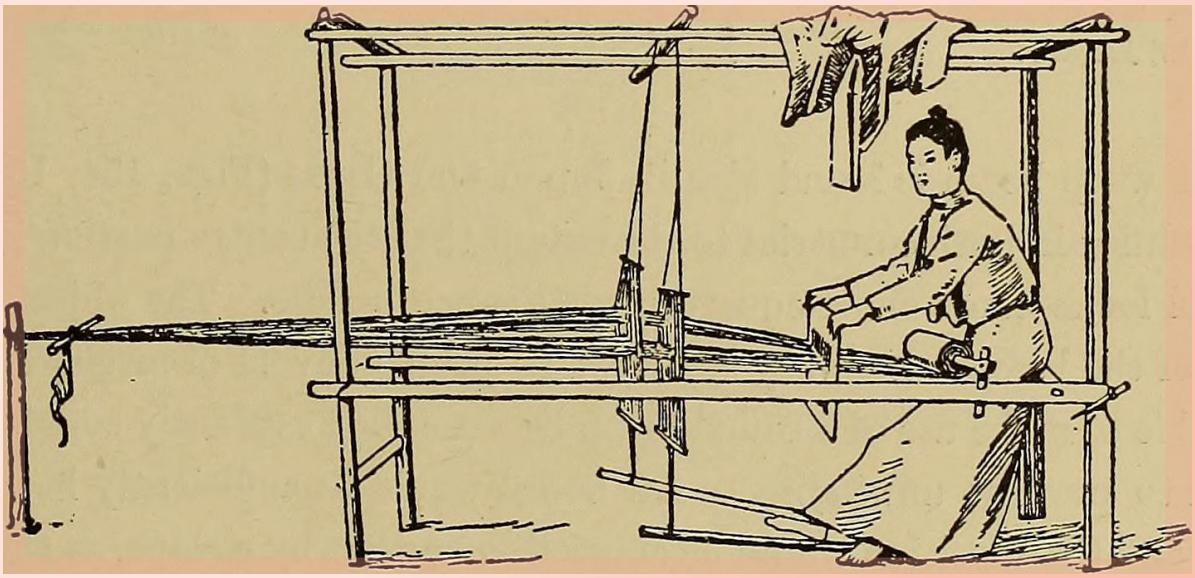
Another advantage of my combined system is that I can graft on new warps with much more ease. In practice this means the bands can go on forever, as I can keep adding on to the material indefinitely. I can also divide or unite the various lengths of warp in something very reminiscent of an organic process of growth. The band becomes something like a continuous earthworm, with no start or finish, or indeed inside or outside[6].

To successfully adapt the structure to my needs, I relied on visual information gathered from historical loom constructions. I found everything I needed in *The Book of Looms* (1979), a comprehensive history of the handloom by writer Eric Broudy. It was a profound experience to see everything laid out schematically in drawing after drawing of weaving systems, especially in the earliest ancient designs. Countless weavers before me, out of necessity, have developed structures to solve all the problems I was facing. Central to them all is how to manage the negotiation of forces in the act of weaving. Observing the innovations and adaptations of the tools, it's striking how there are similarities across history and geography. It is necessary to learn to negotiate the same forces across time and space, and the convergent evolution that means we all end up with similar design solutions, unifies me to a complex and powerful tradition in a very physical sense.

---

[5] Change the positioning of the vertical warp threads; for example, those raised up become lowered or vice versa, to allow the threads to bind into a cohesive structure with every passing of a horizontal weft thread.

[6] Ingold reflects on the fact that we are dependent on the existence of a surface to separate an inside from an outside, and how weaving in particular confounds this distinction, due to the alternate appearance of a single thread on both sides of a woven material simultaneously: *Indeed it is in the nature of weaving, as a technique, that it produces a peculiar kind of surface that does not, strictly speaking, have an inside and an outside at all.* 341.



Muhso woman weaving a cloth (1896)

Illustration from Roth, *Studies in Primitive Looms* (1917).

My modified backstrap combined with shafts, inspired by historic loom structures. The shafts are manipulated using the feet, leaving the hands free to work more effectively.

April 2022

The weaving system that has evolved around me allows me to connect to the architecture of where I am sitting; I make thin lengths of warp, silk umbilical cords that can wrap around beams or protrusions, attaching me both to the surroundings and the structure itself. By removing and re-winding the woven band around my waist as I progress along the warp I can continually grow a long woven tail. When the tail is long enough, its length is used to regulate the height of the unwoven warp, to anchor the loom to my waist and to the counterweights, and to connect my feet to the shafts, making possible their movement of raising and lowering. Everything is fashioned from the same unbroken band that is generated in my loom, so that the system itself is partly woven. It has become a self-contained system of proliferation and exchange. The choice of color mirrors the shades of my own varying skin, and perhaps suggestions of the colors inside me; pale beige, bruised copper red, dark salmon. Since I have worked mostly with silk over a slightly thicker wool core, this reflects the light over the ripples created as I weave, as I lean to a certain direction, the waves follow. As I concentrate, the lines can be even, or if I am tiring, the uniformity slips. I can print, through the weft, a portrait of my bodily state over time, in the form of long woven bands. I must constantly negotiate the forces of gravity in action, and use (significant) muscular power to enforce my will when I need to advance the warp or extricate myself from the precarious balance of weights.

In relation to these dynamics, there is more to glean from Ingold. He compares making (weaving) artifacts to the way organisms, like the spiral shell of a mollusc, follow a natural genetic order but also respond and adapt to their surroundings. Even though there is a blueprint of sorts, the encoded plan will never be able to hold all the necessary information to describe the final result. He refers to growth as occurring in the 'morphogenetic field' – a biological concept he defines as *the total system of relations set up by virtue of the presence of the developing organism in its environment.* Specifically in terms of the blueprint of a spiral in a mollusc's shell, he writes that *...the role of genes in the morphogenetic process is not to specify the form, even incompletely, but to set the parameters – such as handedness and spiral angle ...within which it unfolds*.[7] During the process of growth, the artifact changes and responds to its specific set of circumstances, all of which will have an impact on the aesthetic and artistic virtue of the result. In the same way, I see myself growing alongside both the band and the weaving structure as a whole. As I realized the need for certain features in my system and added these, I continued the process of adaptation to my specific set of circumstances. Listening to the

[7] Ingold, *The Perception of the Environment*, 344.

material and my own body provides answers for how the generative practice needs to unfold. For example, guiding the woven band to loop back in order to support my feet, and tying it around my lower back to keep me upright, makes my system both comfortable and effective. Together we adapt and evolve the necessary changes to reach a point of balance.

I start with a vague direction to follow; a plan, a framework, but depending on the specific situation I transplant myself into, we collaborate on the generation of the circumstances. Ingold calls the artifact *the crystallization of activity within a relational field, its regularities of form embodying the regularities of movement that gave rise to it*.[8] In the same way, the generative situation develops alongside my physical movements.These are direct and entangled consequences of reciprocity.

This is the same kind of practice that has followed the wavering evolution of weaving for thousands of years. According to Broudy in *The Book of Looms,* it is generally agreed that the weaving of textiles has been around since the Neolithic age, the final period of the Stone Age (between 10,000-4,500 BC). In terms of the gradual development of the technology, he writes:

> The temptation in discussing an evolutionary process, once you have established a plausible beginning, is to seek links that lead in direct lines…like a family genealogy down to the present. But this temptation must be resisted for several reasons. A beginning that seems plausible through historical hindsight in fact may not relate at all to how the process originated. Accident must be at least prevalent in the history of ideas as in the evolution of a species, particularly with regard to an idea as fundamental as weaving. The rudimentary beginnings of weaving undoubtedly originated independently in various places in various ways.[9]

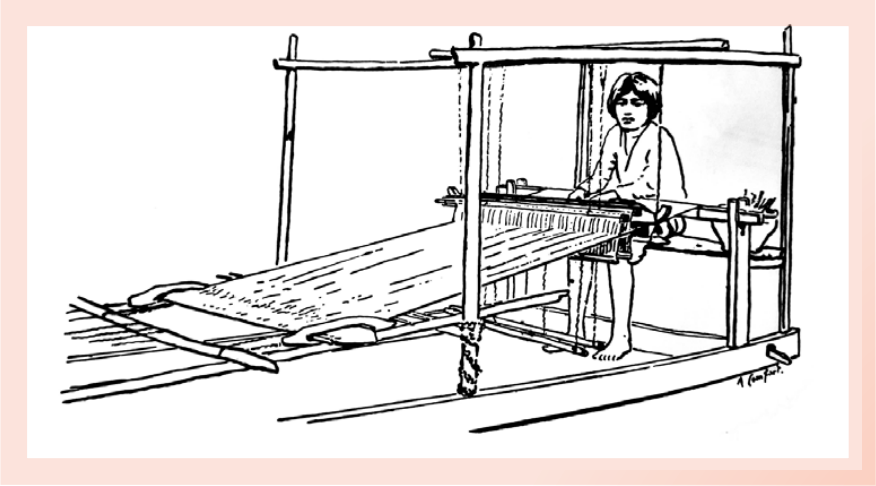
Weaving can thus be seen as occurring as a response to individual circumstance and need, developing in meandering ways according to the specific environment where they occurred. It was not a simple A to B process, rather a collaborative and adaptive system that came about simultaneously, and astoundingly congruently, in multiple locations at the same time.

---

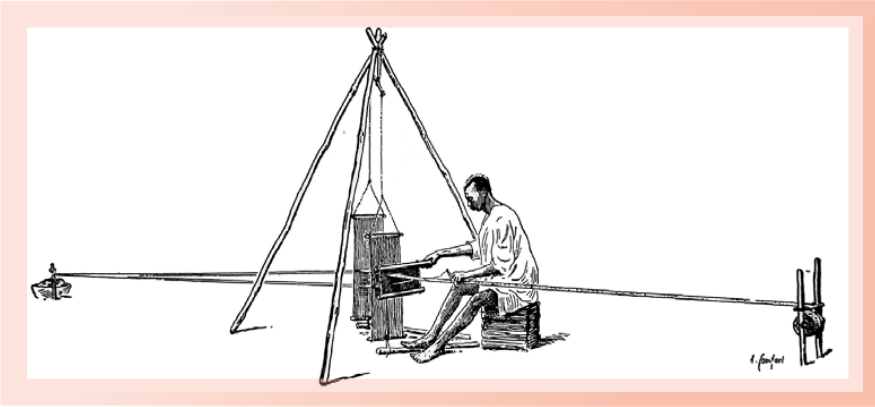
[8] Ingold, *The Perception of the Environment,* 345.
[9] Eric Broudy, *The Book of Looms*. (Cassell ltd., London, 1979). 11.

He also makes a point about how the original idea of weaving may, as some claim, come from the inspiration of observing nature (the way interlaced branches in a forest canopy made a net, or how the reeds covering the floor of a shelter randomly interlaced into a durable mat when trodden upon over time), but that an important element was the inherent properties of weavable materials itself, and *what they allow*.[10] In other words, when engaged in a dialogue motivated perhaps by curiosity or idleness, a fiber was experimented with and inspired its own enmeshing with several other strands of the same type, based on its own inherent properties, having a say in its own preferred constellation. This further aligns with Ingold's discussion on the shape of the woven basket: how its form was negotiated between the weaver's muscular power and the pliable yet resistant branch, settling in remarkably consistent basket designs across geography and time. [11]

[10] Broudy, *The Book of Looms*. 11.
[11] Ingold, *The Perception of the Environment.* 342.



Cambodian Loom
with rectangular frame.



Tripod loom from Sierra Leone.

Indian pit loom (1835). The weaver sits in a pit in the ground with the warp suspended out on ground level, solving the technical problem of building an outside structure. The shafts are using palm trees as supports.

Ilustrations from Broudy, *The Book of Looms* (1979). 120, 104, 106.

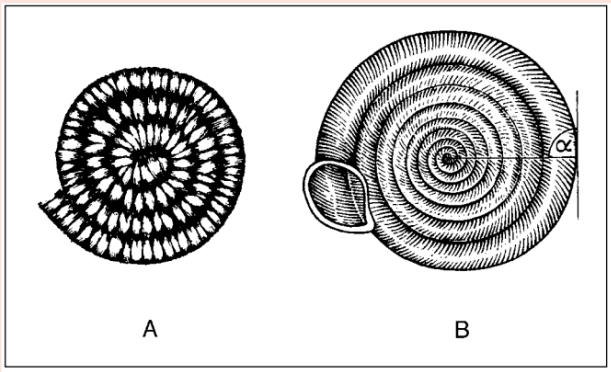


Figure 18.2 Artefactual and natural spirals: (A) Coiled basketry.

From F. Boas, *Primitive art*, published by Dover Publications, 1955 [1927], p. 20.

(B) Gastropod shell. The angle α is known as the 'spiral angle', which in this case is large.

From D. W. Thompson, *On growth and form*, published by Cambridge University Press, 1961 [1917], p. 192.

The form of the basket has evolved in remarkably similar ways across geography and time. The conversation has continually occured with the same participarting forces.

Illustrations from Ingold, *The Perception of the Environment (On Weaving a basket)*. 343.

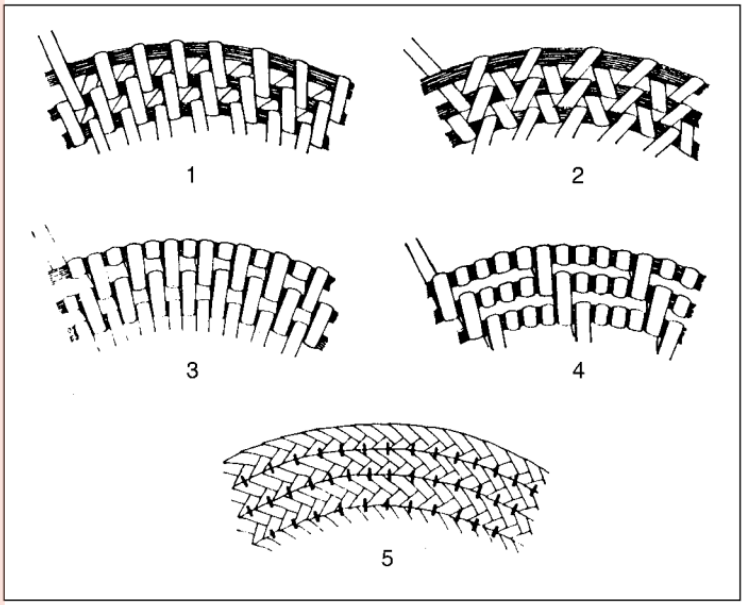


Figure 18.1 Patterns of wrapping in coiled basketry: (1) plain; (2) figure-of-eight ('Navajo'); (3) long and short ('lazy squaw'); (4) Peruvian coil; (5) sewn coil.

From H. Hodges, *Artifacts: an introduction to early materials and technology*, published by Duckworth, 1964, p. 131.

Watery connections – The dye bath as a pool for merging

Another relevant process in these negotiations is the dyeing of materials. Here, water is an essential element: we (the yarn and my body) heat, rinse and soak in watery batches. I need to wear gloves, because the toxic chemicals will not hesitate to cross my skin barrier. Of course, this is precisely the kind of thing I would like to encourage. This is why I have chosen to dye my silk with beetroot to achieve my bodily color palette, hoping to casually and non-toxically absorb something in the process. Peeled beetroot can safely stain my utensils, tools, hands and whatever else it comes in contact with – a form of documentation of traces that are left behind. It becomes an interesting chronicling of presence and timelines, much like the repetitive layering-sedimentation of weaving thread after thread. Beetroot is an unstable source of dye that easily fades in sunlight, so our exchanges are not static. My skin darkens in the sun, and the pigment fades. When I eat a lot of beetroot, my urine is pink with expelled pigment, in a beautiful demonstration of the body's ability as a filter.

Initially, I had the problem that the stains left on my hands after dyeing washed out too quickly, not lingering the way I hoped it would for maximum reciprocal connection. Ideally I wanted to dye parts of myself alongside the silk. When I would prepare beetroot at home, my cutting board and fingertips would clearly and easily absorb the color, but when I actually wanted the stain to stick around, it would be harder to harness. The memory remained stronger.

A solution to this dilemma materialized when I realized I could dye the band, as it was woven, with my feet. Wearing socks to keep the dye saturated and in place for longer, I dip my feet in beetroot juice and leave a trace on the band where it has been used to manipulate the weaving shafts. As the weaving progresses, footprints documenting my movements appear in the material as it accumulates. The soles of my feet are left with a wonderful color that lasts the entire working day. Inspired by the beetroot-stained cutting board, I can also leave footprints on my weaving bench when I rest my feet. Unlike my hands, which are washed constantly throughout the day, my feet can carry the same pigment in tandem with my woven work for a longer time, at least until the next shower. The pink-tinged memory of my work finally spirals down the drain with my bath water at the end of each working day.

Astrida Neimanis, an interdisciplinary scholar in the field of feminist environmental studies, has through her book *Bodies of Water: Posthuman Feminist Phenomenology* provided me with a mold to pour some of this work process into. Her exploration of embodiment uses water to highlight the uninterrupted continuity between all forms of life and being, through water as that which "interpermeates and connects bodies"[12]. *Watery embodiment, as I offer it up, is neither speculative fiction nor thought experiment, but a complex description of the way we live as bodies, and specifically as wet and spongy ones*. [13] The water in my dyepot is arguably uninterrupted as it passes through my own waterlogged body, as it permeates the textile body of my woven backstrap band, as it sustains the silkworms and sheep that provided the fiber, as it provides the vector to transfer pigment to my feet and back down the drain. We are bound together in our dependence and interaction with water. Neimanis writes – ...*as bodies of water we leak and seethe, our borders always vulnerable to rupture and renegotiation..Our wet matters are in constant process of intake, transformation, and exchange – drinking, peeing, sweating, sponging, weeping. Discrete individualism is a rather dry, if convenient, myth*.[14]

[12] Astrida Neimanis, "Bodies of Water: Posthuman Feminist Phenomenology," in *Bodies of Water: Posthuman Feminist Phenomenology* (London, UK: Bloomsbury Academic, 2017), 1-26.
[13] Neimanis, *Bodies of Water,* 30.
[14] Neimanis, 2.

Leaving beetroot footprints on my silk band and bench,
absorbing the color
through my feet.

April 2022

Case study of a watery and spongy body

My antidepressants induce horrible night sweats. This happens especially during intense work periods (paradoxically re-inventing weaving systems that have been around since the iron age). I wake up freezing because the sweat is doing its drug-induced misunderstood evolutionary duty, to lower my temperature despite the cold weather. I sleep on towels, change my shirt, wipe off the water that pools through my skin. Inevitably it soaks into my mattress and sheets. The water connects me physically to my bedclothes in this way, the wet sheet is a hybrid textile object (as introduced earlier, an interface for my immediate internal and immediate external landscapes to enmesh in). The journey of the chemicals continues beyond this, however, and the consequences can be difficult to fathom and take ownership of. Regarding this, Neimanis writes: *Imagining ourselves as bodies of water, I argue, provides a vector for at least partially mapping these responsibilities. When we pee antihistamines into waterways, the 'distributed agency' of those drugs on hydroecologies, on riparian flora and fauna, and on weather systems, drips from our bodies, too.*[15] Neimani's reference to antihistamines tethers me to my chemical connection to wider bodies of water, an extended hybridity. According to the Norwegian Institute for Water Research (NIVA), fish, second-hand medicated on my brand of antidepressants, stop reacting to predators in their environment, leaving them vulnerable.[16] The function of anxiety was, after all, originally self-preservation. I feel very sorry; my urinary contribution to the waterways goes beyond some harmless beetroot pigment. We are one entangled mass.

[15] Neimanis, *Bodies of Water,* 17.
[16] Höglund, E., Ø. Øverli, and Å. Åtland. "Legemidler På Avveie Kan Gjøre Fisk Mer Utsatt for Predatorer." NIVA. Norsk Institutt for Vannforskning, August 19, 2020. https://www.niva.no/nyheter/legemidler-pa-avveie-kan-gjore-fisk-mer-utsatt-for-predatorer.

(zooming out)
Mutual consciousness

Having such awareness of our state of interconnection can have the obvious function of helping us understand that actions, both generative and destructive, have consequences.

On the one hand, reciprocal connection can make us feel supported by our interdependence with the environment; a sense that you can be nurtured by the intelligence of the systems that surround you. There is elegance and purpose to the cyclical aspect of matter in the world. On the other hand, this inevitably reminds us that our actions ripple outwards, most often beyond the scope of our understanding. Modern living tends toward self-containment, ignoring that we have evolved into helpless, intricate and mutual tethering to our habitat. This misconception promotes our destructive capabilities – the gradual, exponential self-immolation that is occurring now would be unfathomable to someone stuck in the conventional illusion of discrete individuality.

Neimanis underscores how reimagining embodiment to include a wider context can perhaps provide a deeper understanding to help us tackle the exponential slide into crisis.
She writes:

> I want…to expand how we understand what it means to live as a body in this planetary context. …Insisting on a posthuman phenomenology means that the hard-to-grasp scales of living in which our watery bodies participate become less abstracted, potentially more sensory. In a context where popular apathy and hopelessness are fuelled by an inability to connect with the more-than human scales of planetary distresses… a posthuman phenomenology can put us in better contact with our bodies as implicated in those hard-to-fathom phenomena – climate change, ocean acidification, aquifer depletion, and toxic transits half-way round the world – which we are co-worlding all the same.[17]

[17] Neimanis, *Bodies of Water,* 42.

Although I am working in a much more narrow field I am convinced, like Neimanis, in the value of striving towards an expanded embodiment in as many of our systems as possible. An arena like artistic research can ideally lay tracks to assist in acclimatizing humans into a way of thinking about and appreciating our roles in a context wider than ourselves; that doesn't just start and end with human immediate need, but tries to include the existence of all the other elements we share existence with. Personally, In future encounters with the textile, I hope my experience with this approach will open roads for me to tackle material consciousness with reverence and a willingness to listen that allows for creative practice with less destructive consequences. There are certainly enough problematic elements in our field that are very easily ignored without such mental tracks (I can quickly mention the importance of tracking the various pollutants in dyeing through waterways, the sourcing of ethically produced yarns and fibers, or considering the lifecycle of the work after it has fulfilled its original purpose). I am just as slow to learn as everybody else, but the karmic reality of existence is certainly seeping in.

This research has altered my course permanently, and I am sure I will continue to nurture and acknowledge the subtle points where there is reciprocity in every generative act.

(and zooming back in)
Embodying experience

I embarked on this research by asking what ways the loom, the materials and my body adapt to each other, and how we could position ourselves in collaboration to enhance our influence on each other. I mentioned the role of bodily material immersion as a motivating factor in this pursuit. To clarify this a little further, I can mention that I often experience the desire to own the beautiful or fascinating experiences I am exposed to, things like textures, spaces, situations (a heap of soft towels, the way segments of cooked fish perfectly separate, water in a shallow pool with light moving through it, etc.). I have longed for ways to quench this kind of sensory thirst all my life. I think a lot of my subconscious (and conscious) motivation revolves around a desire to want to ingest, merge with, precisely become these things. A project of extending embodiment into these territories seems the preordained route for someone with my instincts, finding these

strategies for how to absorb particularly essential elements into myself so I can carry them with me forever. I feel like I am starting to see the contours of a very concrete answer to this longing now, and it is thrilling. Working in this way has been like magic. I hope my wonder translates in my results, and that it can be conveyed to an outside audience.

From the start of my artistic practice, blurring the distinctions between my body and my work has been an important guiding vision. Now that I feel I am closer than I have been before, a challenge has been how to include an audience into this ecosystem. My weaving structure will be displayed in a few weeks, and it is important that it is activated. I will be weaving, as an integral part of the generative force field, in the exhibition space. The unbroken band will anchor itself to the beams of the roof, the unwoven warp balanced and held in place by both the sections already woven, weighed down by dye pots filled with baths of beetroot. When I am not present, a level of activity will be upheld through these dye baths, where the fibers will continue to transform and collaborate with the pigment. The beetroot footprints on my weaving bench will allude to my presence in the structure during the times when my body is absent.

To help me understand how to effectively convey my work to an audience, I look to other artists who have been important to my practice, to whom I owe a debt. Works of art that linger with me when I am in the role of a spectator, are the ones that affect me physically. I gravitate to pieces that allow a kind of bodily identification, that include my body as an imagined physical extension of the work. I like to be able to imagine the work leaving a trace, and coloring off on me.

Projects like Karla Black’s installations using cosmetics and Teresa Margolles’ performative confrontations using water contaminated with violence are examples of this (see the next couple of pages for a brief overview). These are works that can be physically felt. In my installation of this work, I hope that my extended body and its processes will be sensed, also when I am not there animating it.

Karla Black. *Particularly Ready.* 2016. Sugar paper and eyeshadow.

Image from David Zwirner Gallery Archive.

In her installations, the Scottish artist Karla Black uses materials like eye shadow pigments and body lotions, gels, bath products and creams. Normally such products are applied to the skin in an elastic outside layer, as a membrane of adornment or lubrication (a membrane even closer to the body than the textile one I have been dwelling on). An extension of the body is implied through its products of embellishment. These materials become indirect bodily representations that through tactile, olfactory, and visual presence provide sensory immersion for whoever enters the gallery space.

Somehow, I also feel like the experience of her works is applied directly on to the surfaces of my body.

Teresa Margolles. *Vaporización.* 2001.

Installation view from the MoMA P.S.1 exhibition *Mexico City: An Exhibition about the Exchange Rates of Bodies and Values.*

Image from The Museum of Modern Art Archives, New York.

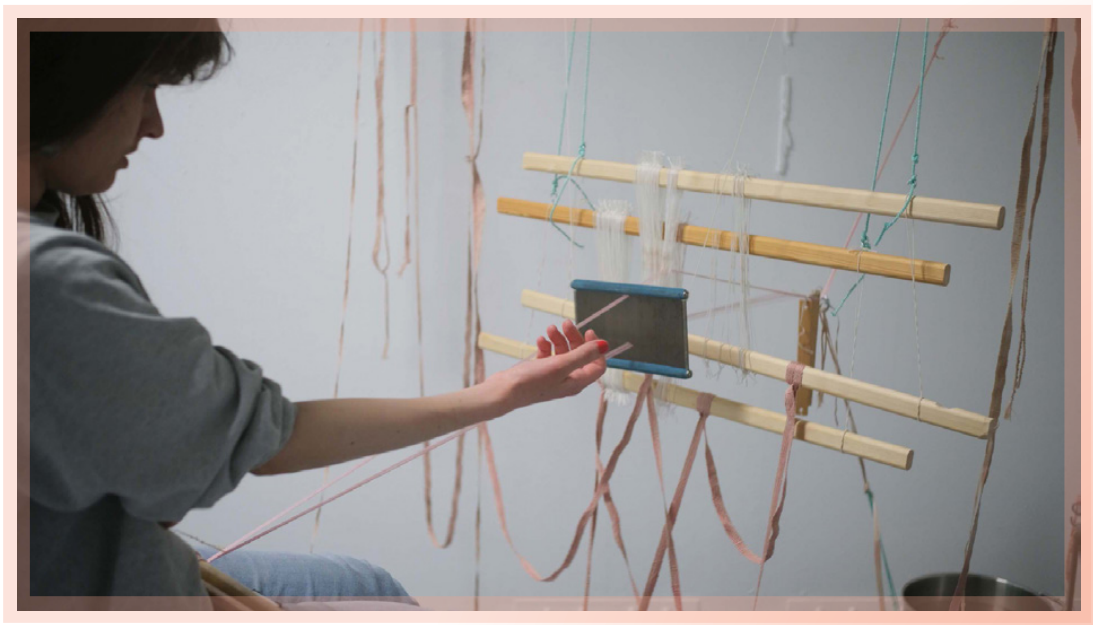
Mexican artist Teresa Margolles was initially trained as a medical examiner, and she continues to work in a morgue in Mexico City. As an artist she tackles the brutal violence that follows corruption and drug trafficking. She creates intensely effective artistic interventions that jarringly expose her audience to the reality of a socio-political crisis of violence. In the installation *Vaporización* (2001) the visitor enters a room where water vaporizers fill the air with a mist. A wall text explains that it is made from purified water, previously used to clean corpses in city morgues. Another example is the performance titled *Cleaning* (2009), part of the work series *What Else Could We Talk About*? staged in the Mexican pavilion of the Venice Biennale. Paid workers mopped the floors of the gallery space with water previously used to clean up scenes of murder in Mexico. Practically invisible, yet no less powerfully present traces of human remains coated these exhibition spaces. Margolles blurs the relationship between the self and the normally faceless other, provocatively creating awareness of a desperate reality. The dead are transformed from symbolic statistics into immediate and viscerally accessible subjects, alarmingly connected to the bodies in the gallery space.

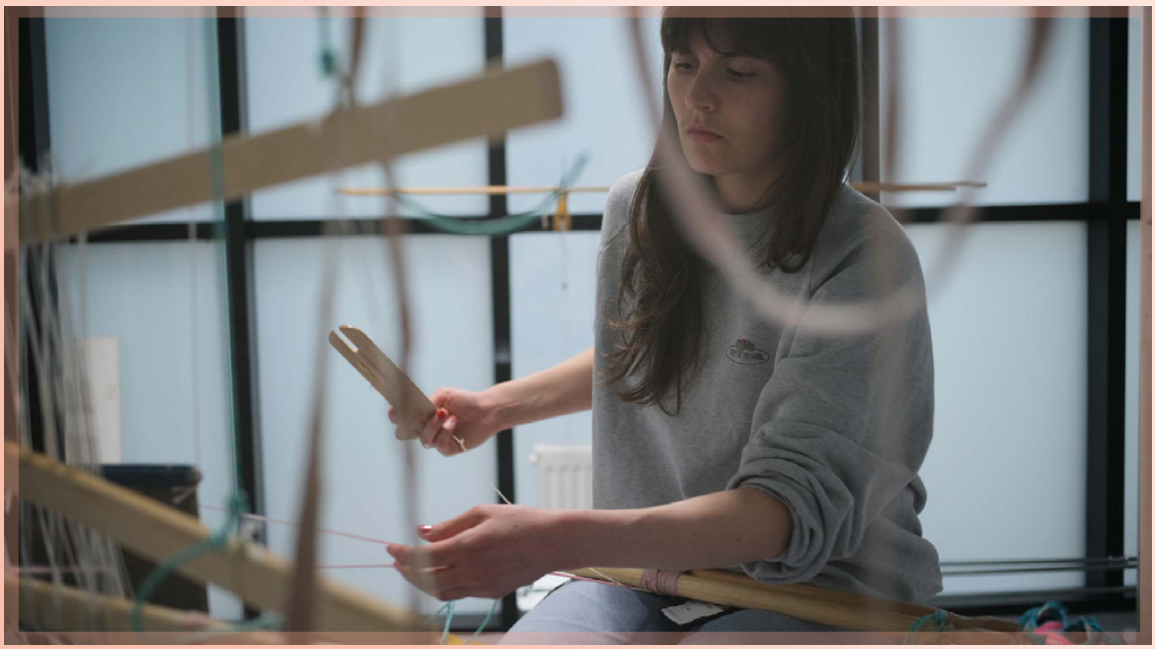
Although there has been plenty of struggle and doubt involved, ultimately this research has been an astonishing experience of harmony. By listening to and observing the points of interactive tension, the process has often generated itself. I have experienced a design process driven by call and response, and developing this approach is perhaps the most deeply felt adaptation I have been left with. This transactional alliance has taught me a way to conduct a rewarding and effective practice. Before I started weaving I was desperately searching for an anchoring method, which now seems to have solidified naturally around me. It has given me the skeleton I have longed for; the loom organizes both threads and thoughts into coherence. I know the work of continuing to adapt to and embody weaving will keep me occupied for a long time. Building on the tensions between us may clarify the negotiation even further, molding myself into an even sharper specialized tool. I would also like to lift my gaze beyond the limits of my own body: I am excited to see how embodied expansion can include outside forces present in other bodies, beyond the scope of my current project.

In the meantime, what is left?

My tools and their material results have been especially adapted to my circumstance, calibrated to fit my body. Together, we make up an enhanced, collaborative being, a product of the exchanging streams that are simmering around us. My loom has become a kind of exoskeleton, like a robot armor, or perhaps a primordial, hand-operated cyborg.

I am struck by the similarities between the weaver and the silkworm. The silkworm builds its cocoon around its body, consisting of a single uninterrupted silk filament, that can then be unwound and spun into thread. I am cultivating a weaving structure around my body, and producing a thin silk band that, uninterrupted, is both material product of the situation as well as weaving structure itself. Warp into weft, movement into weaving, weaving into loom, pigment into skin into bloodstream into waterways, work into body, chaos of thread into coherent textile. We circulate and lean on each other.





Final structure, including beetroot dyepot for anchoring and pigment-stained weaving bench. The socks are treated with a mordant chemical to allow the pigment to affix to the material. The loom is operated using the same unbroken band that is being simultaneously woven, using body tension.

April 2022

Photo: Kristina Hernandez

Bibliography

Bennett, Wendell Clark, and Junius B. Bird. *Andean Culture History*. New York: American Museum of Natural History, 1964.

Black, Karla. *Particularly Ready.* Installation view. David Zwirner Gallery Archive. 2016.

Broudy, Eric. *The Book of Looms.* London: Cassell Ltd, 1979.

Ingold, Tim. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London: Routledge, 2000.

"Legemidler På Avveie Kan Gjøre Fisk Mer Utsatt for Predatorer." NIVA. Accessed February 16, 2022. www.niva.no/nyheter/legemidler-pa-avveie-kan-gjore-fisk-mer-utsatt-for-predatorer.

Margolles, Teresa. *Vaporización.* Installation view. New York: MoMA PS1. 2002.

McLuhan, Marshall. *Understanding Media: The Extensions of Man*. Cambridge, MA: Massachusetts Institute of Technology, 1964,1994.

Neimanis, Astrida. *Bodies of Water: Posthuman Feminist Phenomenology*. London: Bloomsbury Academic, 2017.

Roth, H. Ling. "Studies in Primitive Looms." *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 47 (1917): 113–50. https://doi.org/10.2307/2843413.

Th. Westrin. *Nordisk Familjebok* 33 ed., 33:37–38. Stockholm: Nordisk familjeboks förlags aktiebolag, 1922.

Rosanna Leonor Vibe
May 2022

rosanna.vibe@gmail.com
rosannavibe.com