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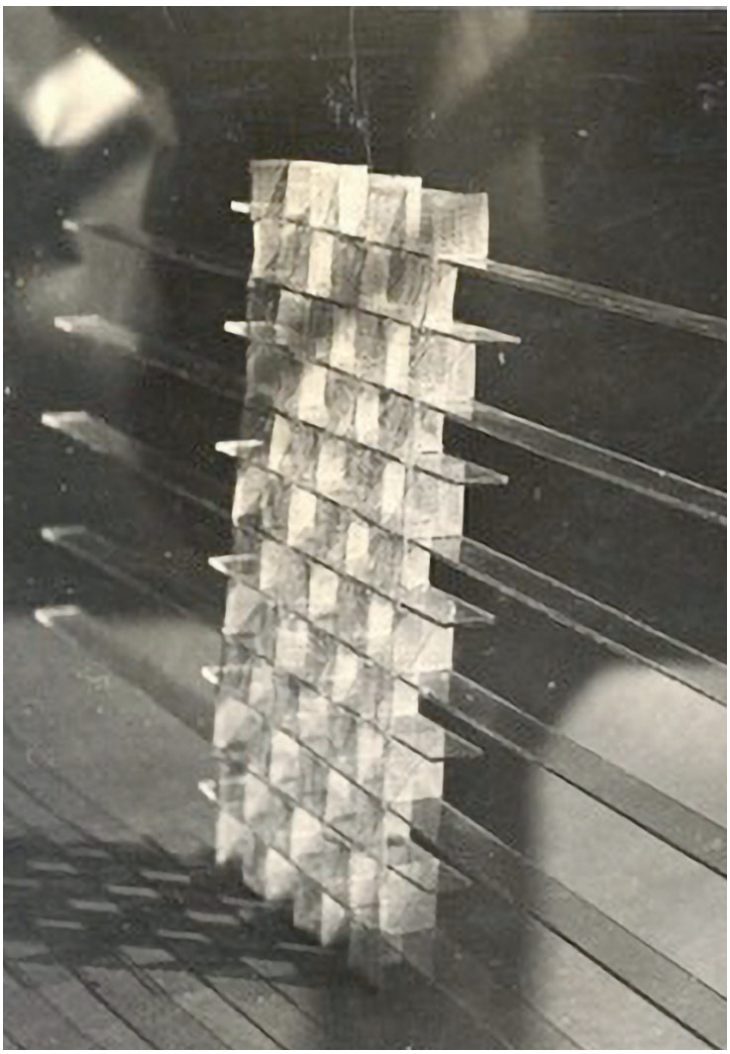
Multi-layered weave investigation, monofilament and cotton, 20 cm x 25 cm. Photo: Mirjam Hemström.

# TEXTILE TACTILITY

Material study, Otti Berger.
Photo: Ursula Kirsten-Collein



IN WEAVE HEAVEN, work made by hand and produced industrially are perfectly partnered and weaving gets designed for the rooms of a house as close to their inception as possible. Why? Because material is of itself complex and comes into its own when it engages with the qualities of a specific room. Ever since the industrial revolution we, living in a western society, have been removing ourselves from a direct experience of objects around, eyeing things has blunted our sensitivities: our society appears now to be calling out for sensory formation. Something has gone missing here and I do not think this is to do with a choice between craft practice and industry, rather about quality: we need sensitivity for materials and to know how to perceive them.

The Bauhaus, when it was an art school in Dessau, Germany, was characterized by its optimism about the balance between the work of the hand and the machine. Its delight in experimentation and curiosity about the potential in industry are matters of interest even today. "Art united with technology" – great! Colour and form were explored through warp and weft in the school's textile workshop. Architectural vocabulary had over some time fed into the language used for textiles, though there were gaps in the terminology and during the early 1930s, textiles began to adopt concepts from the burgeoning sphere of photography.

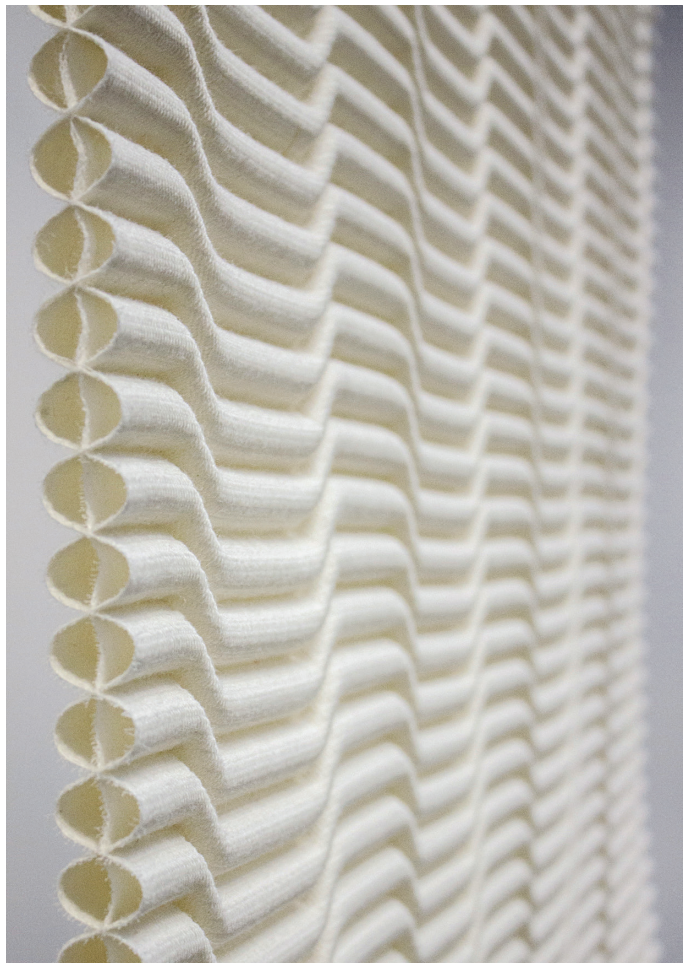
T'ai Smith's book, *Bauhaus weaving theory: from feminine craft to mode of design'* gives an account of how Bauhaus weavers fought for the place of textiles in 20th century design and expanded concepts such as *craft* and *art.* The basis for this article leads on from Smith's analysis of the haptic and textiles, since it was this very book which made me persist in getting Gothenburg Library to find the original text, *Stoffe im Raum* – Otti Berger's article on tactile-visual weaving, in for me incomprehensible German.

Textiles had long been portrayed as part of an interior, but in 1931 it so happened that the Bauhaus July issue published a close-up of a fabric on the front cover. The photograph was the lens through which the tactile aspect of the textile became visible. Background: There was intensive on-going debate at the time on how to use photography in society and in culture. As early as 1709 it had been mooted with reference to optics that because the eye can only see two-dimensional patterns of light and colour for perceiving shape and distance, the brain connects these with sensory memories to experience three-dimensionality.

Art historian Riegl wrote about the brain's way of using tactile and optical methods to interpret its surroundings, and introduced the terms *optic* and *haptic* into language applied to art matters – it would actually seem that the world developed from nearsighted haptic to far-distant optical. With photography, we began to experience places and spaces through pictures in newspapers and thanks to the development of photography, Bauhaus weaving was given a boost. The July issue cover picture revealed variations in the thickness of the thread and the shadow effects caused by the meeting of warp and weft. Folds in the fabric and material encounter created tactile sensations. Close-ups enhanced tactility; while promising, infinite dimensions offered by the zoom lens contributed to an edge of expectancy.

The weaver Otti Berger studied at the Bauhaus 1927–1930 and it was through the course given by László Moholy-Nagy, who vigorously upheld the necessity of tactility for sense perception, that different sensory properties such as pressure, puncture, rubbing, pain, temperature and vibration were examined singly and combined. Berger mapped

Juliette Berthonneau's sculptural and textured woven work from the *Bouncing Patterns* series.
White weave: 100 cm x 100 cm. Green weave: hieght 100 cm, diameter 25 cm.
Photo: Juliette Berthonneau



out a variety of materials and their optical and tactile qualities, and through combinations of colour, shape and material saw how different characteristics seemed to overlap each other or merge into one and the same surface.

No other Bauhaus weaver made such a strong appeal for tactility as the primary quality in a textile. Berger's article, *Fabric in a space,* in ReD magazine, 1930, takes up an issue subject to misrepresentation: different materials' tactility in relation to kinaesthetics (the movement of the body in relation to an object). The article became part of the debate to do with the sensory status of an object. Berger took her starting point from the then topical discussion about photography as an optical medium and developed this line of reasoning by showing how a textile was not just an optic object, but also and even perhaps primarily a tactile object. She used the word 'Griff' (grip) and by demonstrating the difference between grasp as in taking hold by the hands and grasp as in understand, illustrated the connection between visual and tactile qualities. Over the years she grew increasingly interested in a textile's haptic properties in relation to interior or spatial design, since she saw that textiles in a room are experienced through touch, sight and movement. Berger wrote about "tactile memory", about the way a textile is not simply experienced as tactile to the touch but also tactile in the unconscious. The discovery of the interaction between optic and tactile elements and her work in applying theory to an actual room space, have made her a forerunner to the textile architecture of today.

Haptic perception, or appreciation, literally means "the capacity to grasp something". In 1892 the psychologist Max Dessoir coined the term haptic for the area of research dealing with sense perception, further described as "the individual's sensing of the world next to his body by means of his body". In the digital world of today, haptic technology is widely used both within virtual reality and for two-dimensional images experienced as three-dimensional or tactile. *Human Haptic Perception* by Martin Grunwald includes findings from psychophysical studies suggesting that macrospatial attributes, such as the form of an object, are strongly linked to sight, while the feel is conveyed more by microspatial attributes, that is, texture.

Berger opined that one needed to be able to grip the texture of a textile in one's hands. Fed as I am by today's discussions about the importance of craft and the work of the hand, I do wonder if she also considered texture as a form of knowledge about a textile's production process. Moholy-Nagy thought that a

finished product says something about process: the working of nature, the handling of the material or the mechanical processes have a bearing on the experience of the product and he illustrated this theory with pictures of a wrinkled person and a shrivelled fruit. Visible aging allows us to discern a course of events. And we can imagine a history, a process that leaves its traces.

Moholy-Nagy used the term "facture", which could be translated as fabrication as well as texture (both are to do with making or production). If haptic perception exists in earlier experiences – does it mean in that case that a material of today is less perceivable because its fabrication lies hidden to us, in another part of the world?

I look at images of my machine woven monofilament work and wonder whether the haptic level is higher or lower. They were woven with the aim of attempting to understand what a haptic textile might look like today. I keep looking and looking, trying to see how the weaves might be experienced. But I can't. Is it the coolness of an artificial material? Or that the work is machine woven? It feels odd not to know whether the weaving is superhaptic or low in haptic quality. Might it be that much of today's material is designed for optic purposes rather than tactile, so as Riegl thought we move from nearsighted haptic to far-distant optic, and that we to a certain extent have lost a capacity to experience material? Would we experience tactility more if we were aware of how something came into being? There is a part in *Thinking Through Craft* by Glenn Adamson to which I occasionally return:

*Once Yagi was asked to name the essence of ceramics. Was it the wheel, the traditional tool of the potter? No, it's not the wheel, Yagi replied. It's the feeling you get when you take soft clay and squish it between your fingers. That's the essence of clay for me.*

The very core of ceramics, according to the Japanese potter Yagi, lies in its production, or hardly even production – rather playfulness with material.

There does seem to be a connection between the haptic and production. It was said that when Alvar Aalto designed the MIT Dormitory Baker House, Aalto went to the brick factory himself and selected the ugliest, most uneven bricks he could find. The facade created with these second grade bricks has an arresting surface that carries traces of the manufacturing process. The wall becomes etched into one's memory and the wonder arising from the shadow play of all the irregularities,

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the dialogue between sun and material in the wainscot, stirs the imagination about the manner of construction and composition. The manufacture of textiles is loaded, since it spans continents, working conditions, fast-fashion, unsustainable consumption, economy, crafts and culture, and it is apparent that industrialization has affected our way of experiencing objects around us.

In her 1933 article, *Stoffe und neues Bauen* (Fabrics and new buildings) Berger, inspired by her work for an interior design company, wrote that for a textile to respond to spatial requirements and on completion express some form of mutuality with a new building, the role of textiles in architecture needs addressing. It seems like Berger would like haptic textiles to be in dialogue on an equal level with architecture, and I think something of this does exist now seen from a time standpoint. Respect for the place shown through sensitively designed fabric. Site specific craft.

Juliette Berthonneau is a Paris-based textile designer with a master's degree from the Swedish School of Textiles in Borås. Her B*ouncing Patterns collection*, which began taking shape in 2019, consists of a series of machine-woven, three-dimensional textiles in a synthetic/natural fibre blend. The collection has a delicate colour scale reminiscent of Scandinavian midwinter spring and is restful on the eyes. Over a video call to discuss textile sense perceptions, I asked her about the relative importance to her of optical versus tactile qualities: she answered that both are important.

– While doing the textile design course, I had the opportunity to meld my earlier training in pattern design with three-dimensional textiles. Adding material substance and three-dimensionality to simple, geometric patterns create a simplicity and complexity simultaneously.

The position of the beholder in relation to Berthonneau's weaves alters the perception of them. When layers of light and movement are incorporated, an intricate wholeness arises and it is clear that the combination of surface, shape and material creates a powerful experience.

She added:

– The woven compositions engage several senses in one and the same piece. Visually, there is a calmness along with the optical effect. Furthermore, when you sit on the weaves, you sense the elasticity in the hollow but load-bearing multi-layered construction. In addition, they create a muted effect on the acoustics in a room. You get a synesthetic experience of sight, touch and sound in one.

We also went into the differences between physical experience and that fostered through photography:

– Simulating a sense experience is interesting! Tactility through images, creating haptic perception digitally, is a challenge. At the same time – our society is becoming ever more non-physical. In French, the word 'dématérialiser' is often used. An image is a frozen moment, while a textile, on the other hand, is always in motion and so as a material is complex. My textiles are both rigid and flexible at the same time, the contrasts provide a paradoxical experience. Translating them into a digital expression is very stimulating.

The "simplex" experience Berthonneau refers to can contribute to an immersive effect in a room. The complexity of the meeting between material, light and the position of the body in relation to the object makes for a highly engrossing experience. She also described the importance of anticipation, the significant difference between how the object looks and how it then feels to touch.

– I like it when people see images of my weaves, form an idea about them appearing hard or soft, only to be surprised when they get to touch them and experience something other than expected. The appearance does not always correspond to the sensation when touched, there is a paradox or discrepancy. That reaction is part of the experience I am after.

Weave is a highly haptic material that can be experienced both objectively and subjectively. There seem to be several ways of fully experiencing spatiality. Proximity to the material, as well as the zooming in of a camera, the process of creation, not to mention the physical, are all significant elements. The weave comes up close, is multifaceted. And it has everything to do with space and a room.

*In the third and final part of this series, Mirjam Hemström will go into the differences between machine-tool and hand and look at some contemporary weaving projects.*