

MoMA

"Marilou Schultz: Weaving Where We Are in Time"

By Emily Olek

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Marilou Schultz with her work *Replica of a Chip* (1994) in MoMA's exhibition *Woven Histories: Textiles and Modern Abstraction*. Photo: Austin Donohue

Fourth-generation Navajo weaver Marilou Schultz has taken traditional weaving patterns and made them distinctly modern. Commissioned by Intel to create a woven replica of their 1994 Pentium chip, Schultz became known for finely crafted weavings that engage the world of digital technology. Her work is currently on view in the exhibition *Woven Histories: Textiles and Modern Abstraction*, and she spoke to us about the enduring presence of the loom in her life, and how she envisions new technologies through ancestral techniques.

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I'm Marilou Schultz. I'm Diné, from the Navajo Nation, and my clan is Naadą́' Dine'é Tábaq̄hí, or Zuni Water's Edge Clan. That's my mother's clan. And then my dad's clan was Tsi'naajinii, which translates to Black Streaked Wood/Dark Streaked/Black Horizontal/Black Rock.

Growing up, my mom had a loom; it was something that was always there. As kids, we helped take care of the sheep in my grandmother's flock. Whatever wool we got, we would prepare (washing, carding, and spinning) so our mom could weave. And we always messed around with her loom, so eventually I picked it up. I come from a large family; my parents couldn't really support all of us financially. Eventually we found out that we could earn money by weaving. So that was our motivation to learn how to weave as kids. It was basically just for survival.

After I graduated and got my teaching degree, weaving became more of an art for me. Since I had a consistent salary, I didn't have to weave just to earn money to support myself. It allowed me to start experimenting with colors, techniques, and different styles and designs in the 1980s. My experimentation took me to other dyes and colors, rather than just using the colors that came from where we lived, where there was not much vegetation. (The only plants that we could use, you got different shades of yellows and then walnut trees for the brown and then a white wash and a natural black or black aniline-dyed yarn.) I was able to use the time to seek yarns that were dyed by other Navajo women.

I was approached to see if I would be willing to do a computer chip weaving. I agreed to it, not having even seen the image. When the picture came, I thought, "My gosh, what did I agree to do? This is impossible!"

My uncle and my dad and mom told us that a long time ago, we used to have wool you didn't have to card—you could just spin it, unlike the rougher wool we worked with. In my lifetime, it turned out that I was able to get the Navajo Churro sheep back into our family—around 1990—with a project out of Utah that was promoting the Churro and bringing it back to our people. I was able to get a ram and some lambs for my mom's place. And that's when we started using the Churro again, with its natural shades of brown, grays, black.

As far as *Replica for a Chip*, [based on] the 1994 Intel Pentium chip, the title that year for the Indian Science and Engineering Conference in San Jose was weaving through technology. I was approached to see if I would be willing to do a computer chip weaving. I agreed to it, not having even seen the image. When the picture came, I thought, "My gosh, what did I agree to do? This is impossible!" It was, but the amazing part about the image was all these natural colors, which I didn't know chips had! So I was able to use what we call the raised outline technique, alternating two colors. Since I'm a math teacher, I looked at it proportionately. I kept breaking it down into halves, making marks all along the photo and cutting it down to 64ths. I looked at it and made the transfer. I didn't draw anything on my warp.

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A lot of our people work for Intel; in my community there is a [manufacturing] plant, where people put together chip and circuit boards for GM [and other companies], that have been around for 40 years. Native Americans are pretty good with their hands and we can think visually. I see that in my kids. When the rug was unveiled to me, it was just a piece of art with a design. And then I heard my students attending the conference saying, "I see this part!," naming parts of the Pentium chip. That was my first exposure to the chip itself.

For the other work in the exhibition, [*Untitled (Unknown Chip)* from 2008], there's lots of shading with indigo, red, and black. More than any experimental weaving techniques, I had to do a lot of special dye techniques to get all those different effects. And then, for [a more recent] circuit board piece, I wanted something to connect our people back with the chip circuit board. I incorporated an abstract spider to represent Spiderwoman. The symbols up on top were in the photos that I've seen of AI chips; you can't really figure out what they look like. But one of the [symbols] was a prong, three prongs. So instead of the three prongs, I made it four because four is significant to our people. And now I'm using metallic thread in my next chip weaving to represent aluminum and copper.

—Emily Olek, Curatorial Associate, Department of Drawings and Prints



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Marilou Schultz. *Replica of a Chip*. 1994. Wool



Marilou Schultz's *Replica of a Chip* (center) in the exhibition *Woven Histories: Textiles and Modern Abstraction*, The Museum of Modern Art, New York, April 20–September 13, 2025. Photo: Jonathan Dorado. Digital Image © 2025 The Museum of Modern Art, New York

I teach kids near Flagstaff. The majority of them are Native (Diné) Navajo kids from my community. I've been pretty open with them about my weaving. I've taken my loom into my classroom to work after school since I don't have a large space up north. The students are always really inquisitive about what I'm doing; it's nice to share with them and encourage them to do something that you really love; you never know what's going to come out of it. Some of their grandmothers weave, so they'll show me photos of what their grandmas have done. I've even done weaving projects in my math classes. I take heavy duty cardboard cut in different lengths and then the kids set up their own yarn and warp and then do the weaving, and then they can take it home. I have them take the area of their piece and choose a place to make a house plan. How many of those pieces would they need to weave to cover the floor or the top of a counter? It's using math from their weaving project to understand what area means, and then taking that further.

My grandson is about 21. He said, "Grandma, I want to go back to weaving again." He's part Hopi; with Hopi people, it's the men that do the weaving. So I guess I'll be setting up a loom here sometime for him again.

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People always ask, How long does it take? What does it involve? With these weavings, I like people to know that the tools that we use and the basic technique is what our ancestors used, that have been handed down for many generations, along with their stories that go with them. They're sacred, and the only thing that has changed today is that an individual artist designs it. Our ancestors did the same thing. You'll see a lot of their weaving had letters. They might have been woven backwards because our people didn't read. You'll see backwards numbers and trains: those were what they saw in the world. It was their modernity at that point in time. So as the generations move on, you're going to see that [we're weaving] where we're at in time.

As told to Emily Olek



Marilou Schultz weaving at her loom

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