



Jim Drain with Forcefield. Video shoot with Gorgon Radeo, Chess King, and Meerk Puffy. Olneyville, Rhode Island, 2000. Machine-knit suits: yarn, hair, spray paint, and hot glue.

Textiles and the Universe

by Jim Drain

If you ever find yourself alone in an unfamiliar longitude and human sympathy is needed, try knitting. I brought \$300 cash, a suitcase, and two knitting needles with me on a ten-day trip to China in the spring of 2001. I took the Shanghai-to-Beijing overnight hard seat and then bused my way back, stopping in Nanjing and Hangzhou. Knitting was new to me. It meant that as I walked in the evenings for street food, the distinctive sound of “whish-woosh” echoed in my head. I could pause and watch hems being hung and sleeve lengths increased in the many stalls that advertised custom-made sweaters for tourists like me. I could speak the knitting language by gesturing a back-and-forth motion with my arms. What I meant to say was, “I bet you could not guess that I know how to machine knit?” I was so proud.

While a group of us waited for a bus back to Shanghai, I pulled out my needles and skein from my daypack. I gained the sympathy of a few Chinese grandmothers. They pointed to me and then reproached their bratty progeny as if to lament something gone. But my mustard-brown sport-weight scarf was no wonder, Grandma. I had no reason to be there. I was in China for neither school nor love. Looking back, I made the trip with the same aloof interest as I had approached knitting: I will be grateful for doing this someday.

I was recently thinking about this trip while reading *The Elegant Universe* by Brian Greene. I began to notice a pattern in the writing, “hidden dimensions coiled into the fabric of the cosmos— dimensions whose lavishly entwined geometry may well hold the key to some of the most profound questions ever posed.” I found the ubiquitous use of textile as metaphor a bit odd. But what was I to expect? The subtitle is “Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory.” To use textiles to describe the most complex ideas of the total universe seemed both funny and appropriate.

Daina Taimina’s story has always stuck with me since first reading about her accomplishments years ago. In 1997, Taimina, a geometry professor at Cornell University, worked out how to make the first successful physical model of hyperbolic space. This model was thought to have been impossible to construct. The challenge was to articulate a surface in which the space curves away from itself at every point. Got that? Taimina achieved this through crochet. She explains, “I have crocheted a number of these models and what I find so interesting is that when you make them you get a very concrete sense of the space expanding exponentially. The first rows take no time but the later rows can take literally hours, they have so many stitches. You get a visceral sense of what ‘hyperbolic’ really means.” For Taimina, textiles provided access both to new ways of seeing and to a kind of three-dimensional thinking, allowing one to perceive huge ideas—ideas almost too big for comprehension.

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