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# Surface *Design*

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textile matters





# Emily DuBois

## The Cosmogenic Weave

by April Kingsley

*So strange—so incredible is the relationship of matter to spirit.<sup>0</sup> —Walter Inglis Anderson*

*April Kingsley served as juror for the Surface Design Association's 1998 Critical Writing Competition for the Betty Park award. This essay introduces a new cycle of award winning essays to be published in the next three issues of the Surface Design Journal. For information on the 1999 competition, send SASE to SDJ Editorial Office, 93 Ivy Lane, Englewood, NJ 07631. The 1998 competition was partially supported by Eldon Park and Friends of Fiber Art International.*

Sometimes all sorts of threads come together in one's life to weave a tie that binds you into something with a sense of inevitability. This happened to me with Emily DuBois and the writing of this article. Emily uses the most modern technologies in computer-aided weaving and the most ancient textile traditions. Her complex process involves surface design as much as structure, and is both planned and full of spontaneous, accidental effects. The imagery comes mostly from nature, but often looks electronic. She creates both surface illusions of depth and true depth of content. Profound spirituality is embodied in hand-shaped materials that are patently physical. She is definitely a both/and kind of person,<sup>1</sup> a complex weave, which today's artist must be.

One crucial thread was my four year tenure as Curator at the American Craft Museum, during which I organized an exhibition of fiberwork from the permanent collection. I concluded the show with a new acquisition by Bhakti Ziek woven on the computer driven Jacquard loom at her disposal where she teaches in Philadelphia. Emily was one of the most interesting weavers invited to participate in Bhakti's exciting 1993-95 Jacquard

Project.<sup>2</sup> Developments there shaped a viable future for weaving that was highly intriguing to me as a subject for this essay.

I called a friend, Carole Kraus, who is very knowledgeable about fiber to ask her who she found exciting right now and she mentioned Emily DuBois, among others. Meanwhile, a notice in *The New York Times* led me to *techno textiles: Revolutionary Fabrics for Fashion and Design* by Sarah E. Braddock and Marie O'Mahony, newly published by Thames and Hudson. Skipping initially over the descriptions of the fabulous new industrially produced fabrics to the art part at the end of the book, I found Emily DuBois' work featured in a discussion of Ziek's Jacquard Project. Then I happened to mention Emily's name to a painter friend, Suzann Dunaway, who had been a weaver in her San Francisco days, and it turned out that she had known Emily well and thought the world of her work. Finally a talk with Patricia Malarcher concerning her desire to bring surface and structure into a better balance in these pages, and the "dye" was cast.

But as I began getting into my subject other strands came into the weave which had unfolding implications for this essay. One such thread was seeing a connection between Emily's fascination with patterns in nature and a book I loved that had been given to me by artist Fritz Bultman about twenty years ago: Theodor Schwenk's *Sensitive Chaos: The Creation of Flowing Forms in Water and Air*.<sup>3</sup> Emily confirmed her familiarity with this book (a rare coincidence, since its spiritual/scientific approach is not for everyone) by using some of its images in her work. A second thread was also a book, but not one Emily ever saw. This time it was *The Horn Island Logs of Walter Inglis Anderson*, a selection from the twenty-year pictorial and written journal of a reclusive Mississippi visionary's experience of nature on barrier islands off the Gulf Coast. More artist/

*She creates both surface illusions of depth and true depth of content.*



Emily DuBois  
*On the River*  
 Woven cotton,  
 15" x 40" x 1/4",  
 1983.

Emily DuBois  
*Event*  
 Woven strips,  
 shaped and stacked,  
 1980.

Emily DuBois  
*Yantra* Woven,  
 dyed, constructed,  
 90" x 96" x 1/2",  
 1985.

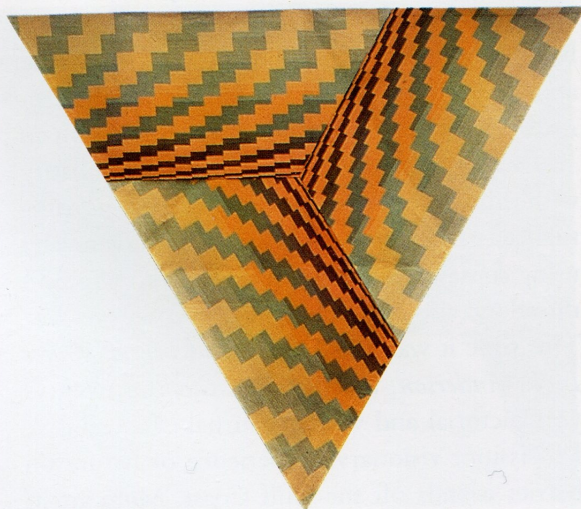
naturalist in the 19th century tradition than scientist, his intense study of the flora and fauna, their habits and the changes "progress" was bringing to them, resulted in vital imagery seeming full of life spirit. The striking concordance of his drawings with both Schwenk's images and Emily's hit with special force because I had never opened the book in the three years since my sister, who lives in Mississippi, sent it to me, until I began work on this article.<sup>4</sup> The piece opens with his words. He also wrote: "Order is here [in nature] but it needs realizing,"<sup>5</sup> words that might as easily be spoken by DuBois or Schwenk and which amazingly prophesy recent scientific approaches to the study of the universe which posit order within its seeming chaos.

This thread, which involves fractals and chaos theory, was among still others that drew me to Emily's work and connected us though we've never met and live a continent apart, she in San Francisco, I in New York. Two more threads were my longstanding interest in things Asian and spiritual.<sup>6</sup> Because it was based in an insistence on the historical actuality of miracles where Christ overcame nature (as in the Resurrection), Western Christianity produced the rational, linear scientific attitude concerned with hard facts and controlling nature through technology that dominated Western practice for two millennia. But, as Alan Watts wrote in *Nature, Man and Woman*,<sup>7</sup> one of Emily's favorite books, "to other spiritual traditions historical facts are of minor importance."<sup>8</sup> For some of these traditions, such as Tai Chi, of which Emily is a practitioner,

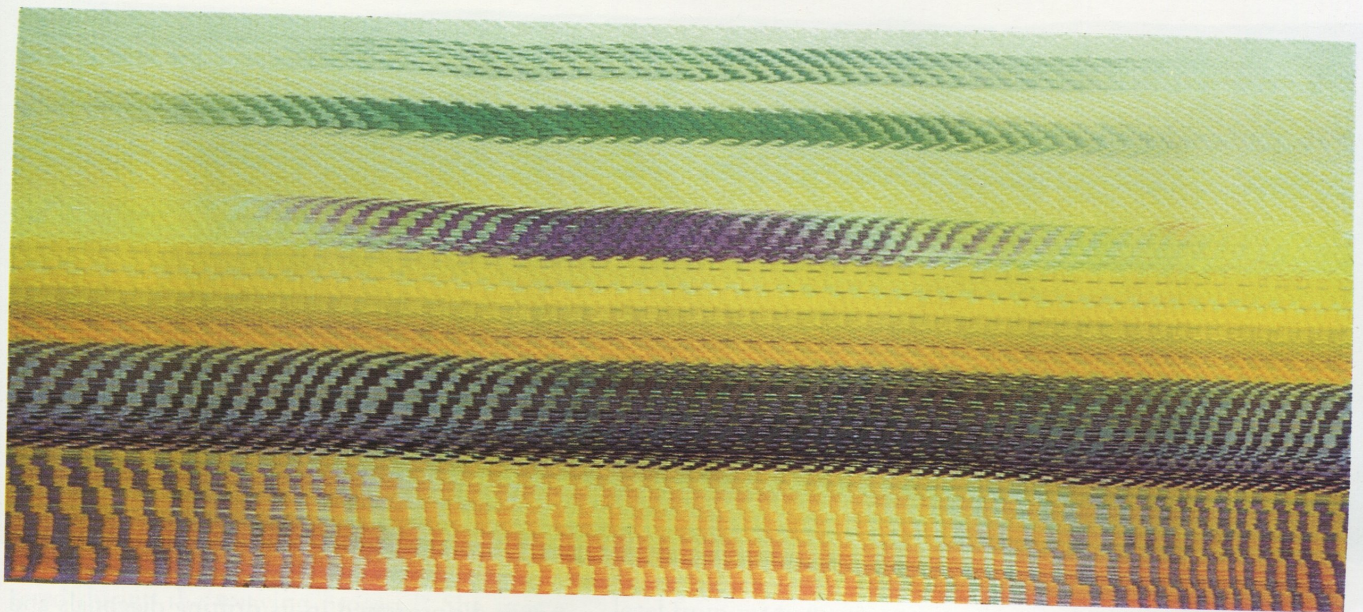
"relations' rather than 'things' are the basic constituents of nature"<sup>9</sup> in an "inseparable relationship of unity-in-diversity," according to Watts.<sup>10</sup> In 1958, when he wrote this book, the post-big bang, ever-expanding but non-linear, "jumping" universe, fractals, the "Butterfly effect," and a host of other new theories which back up these "other" spiritual traditions were not in existence. A final thread came into play while I was writing this which tied all these strands into one big bow: the post-Modernist architect/theorist Charles Jencks' book, *The Architecture of the Jumping Universe*.<sup>11</sup>

Everything is interwoven. But before I delve into some of the fascinating interlocked threads that are layered in her complex imagery, I should attempt a backgrounding synopsis of Emily DuBois' life and work. Emily was born in 1946 in New Rochelle, New York, to an electronics engineer/inventor father (the Kardon<sup>12</sup> of Harmon-Kardon) and an interior designer mother who encouraged her interest in art. She studied drawing, printmaking, and photography before she stepped into the weaving studio at the Rochester Institute of Technology and fell in love with the loom. (Later her mother reminded her that she always played sitting at something: the piano, when she was younger, and now the loom.<sup>13</sup>)

After graduating she taught weaving for a while, moved to San Francisco and went to the California College of Arts and Crafts for masters level textile study at the end of the 1970s. Instead of weaving during her first year in graduate school, she made drawings and three-dimensional constructions using intersecting units in a weaving-like system. The drawings were 3-D illusions reminiscent of Op Art and of Judy Chicago's paintings,<sup>14</sup> with notations on five line staves along the sides referring to EKGs, music, weave drafts, number systems (such as the Fibonacci series), and mathematical formulae (in one instance, the Golden Section). But the woven works from these drawings didn't come until after a post-graduate year in India<sup>15</sup> where she acquired the technical skills they demanded. They resulted in the *Yantra Series* of large, triangular, constructed weavings. Meanwhile, for her 1980 MFA show, she was concentrating on shaped weavings in which two dimensions created the illusion of three. She shaped them by packing the weft



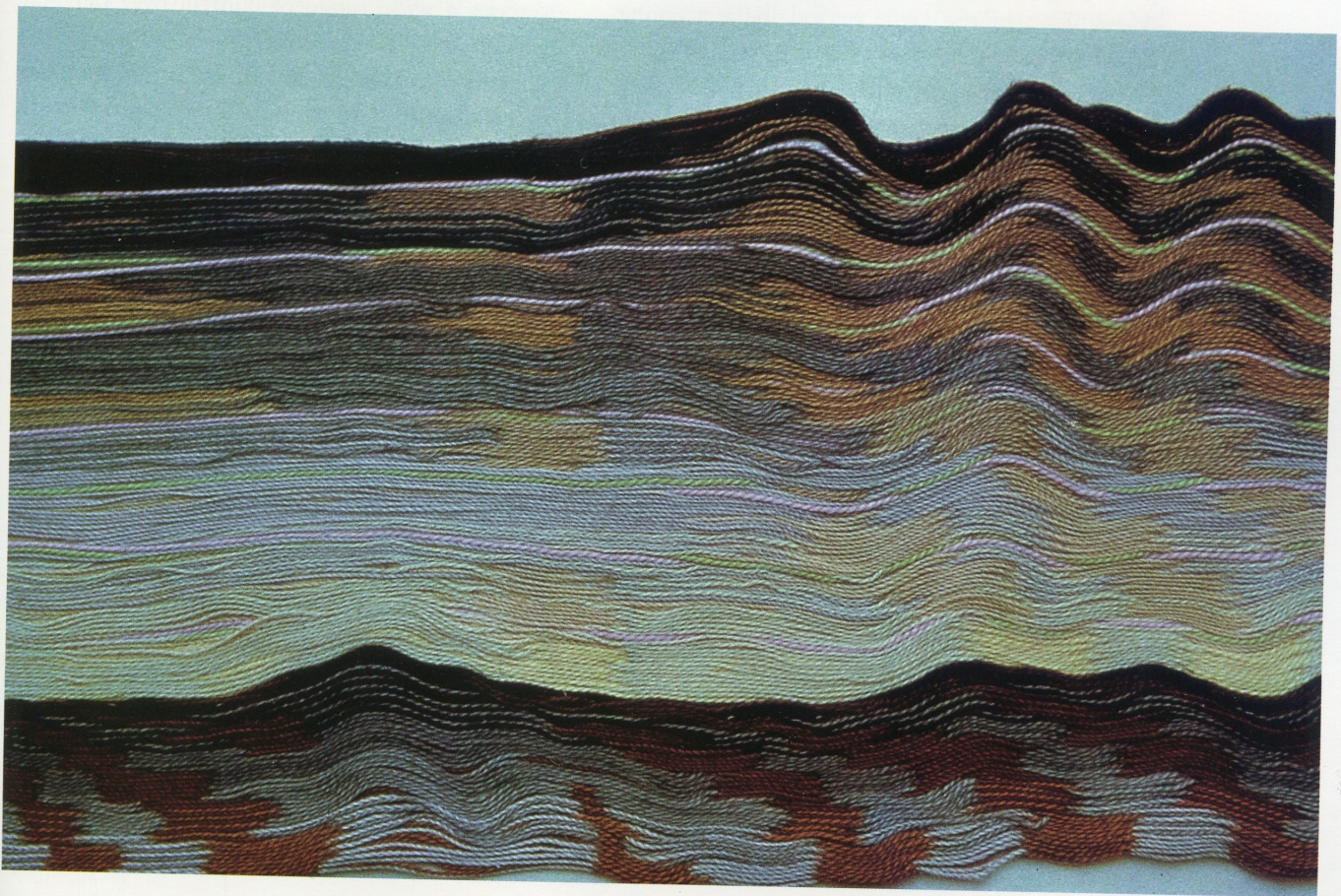




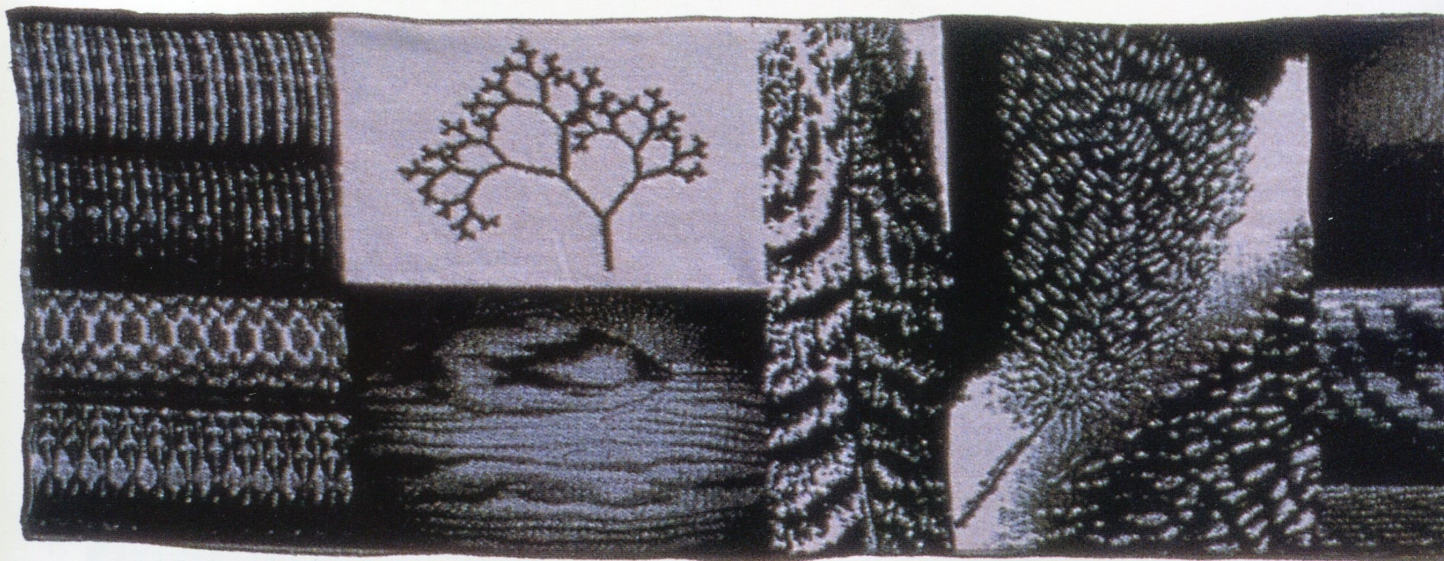
threads of long woven strips closer in places so that the fabric could be pulled on the bias making wavy-edges. They were ironed onto fabric backing and then attached as free floating units in the case of *Streamers*, or lain flat like *Sky Book*, or, with *Event*, which was an 80-foot long band

of wavy, stacked strips, run continuously along the walls like supergraphics.

Besides learning elaborate brocading techniques on a Jacquard-like draw loom in India, which led to her use of an AVL compu-dobby loom on her return,<sup>16</sup> she was inspired to seek







Emily DuBois  
*Twenty-four Frames*  
 (section of piece  
 14" x 24") CAD,  
 jacquard woven,  
 1995.

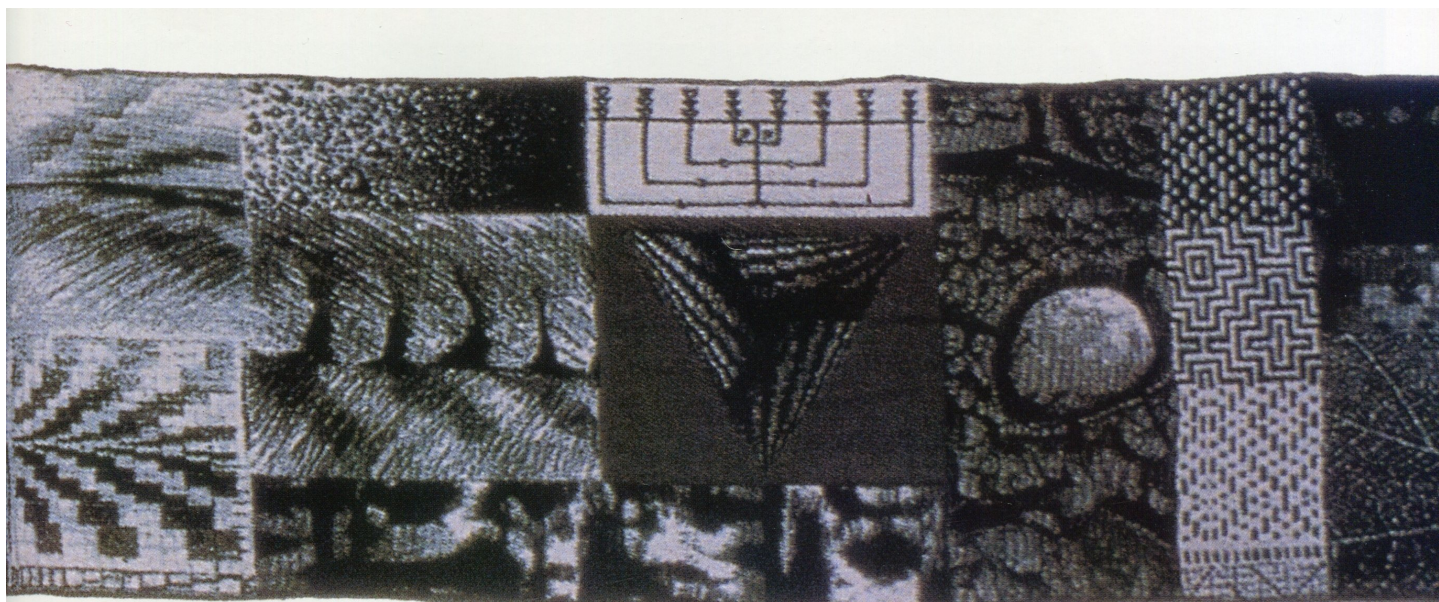
more depth in her work. She had been studying Tai Chi since she began grad school, but in India, the importance of their religion to the daily life of the people, and its intimate ties to the waters flowing through their land made a strong impact on her. It can be felt in her abstracted landscapes of 1983-84, especially *Sunrise* and golden, glowing *On the River*. *The Cape* and *Moon Warp* of the same period, have a cooler, dreamier, nocturnal quality which probably echoes her teenage experience of Cape Cod, where she spent four summers caring for children and learning what she could about art from local teachers. From then until today, she has been an avid drawer, working out more complex compositions in pastels, and even sometimes literally weaving her works on paper. Printmaking, too, has interested her all this time, lithography in particular, which she can manipulate in ways that are similar to the surface design processes she uses in her weavings.

Though she had wanted to study ikat dyeing in India, it wasn't until she worked with Virginia Davis in 1984 that she had the opportunity to take it up. Whereas Davis uses ikat with spectacular precision to make conceptual points, DuBois uses it romantically, for its pictorial effects. Rippling water, light reflections, shimmering sands, clouds, smoke, flickering citylight skylines, or rainsoaked leaves may be conjured up by the darting, flashing lines. Multiple levels of transparency can result, and the power of the horizontal and vertical axes to dominate the im-

age is disintegrated in its drifting diagonals and curves. *Lake Merritt I*, 1986, an 18 x 128 inch, scroll-like representation of a lakeside city's reflection in the water at night, was woven of black, blue and gray cotton threads<sup>17</sup> bleached to red and orange in the warp beforehand for the circles, lights and reflections, but discharged by painting with bleach in the skyline after weaving. Emily exercises a wide range of control over her ikat dying from illusionistic representation (which demands precision) to painterly abstraction where chance is in charge. Her appropriately titled *I Ching Series* of 1987 goes the farthest in the latter direction, and concomitantly, in the direction of imagistic unrecognizability. All you could say these small (17 x 17-inch) works resemble might be interference patterns on TV despite some "horizon lines."

A series of large abstract works completed between 1989 and 1991 such as *Feather Ghost*, *Lake Spirit*, *Approach*, *Flicker*, *Lost Icon*, and *Kerkes* show Emily DuBois in complete command of both structure and surface, which she views as the "skin and bones" of textiles. For her they are equally essential and she doesn't consider them separate disciplines. "Weave structure is in fact a kind of surface design," she says. "Ikat dyeing is completely integrated with the weaving process, and even painting and printing techniques must take into account the properties of the fabric to which they are to be applied."<sup>18</sup> DuBois' strong compositions derive from her formal concerns worked out loosely on paper but inevitably al-





tered during the weaving process.<sup>19</sup> She uses a computer to design the weave structures (but not the imagery). They are of the type known as color-and-weave where the colors of the warp and weft, and their dark/light qualities result in visual patterns that are not the same as the structural pattern. She favors complex twill, satin, and shadow weaves to get the most various and unpredictable effects, even *moiré*. Those colors are variously resist-dyed and or discharged before and while on the loom so that, when the computer driven shuttle makes its rapid pass through the shed,<sup>20</sup> the structure is consistent but the resulting visual pattern is not. Afterward she may also use *shibori* (stitched or clamped) or hand-painted dyeing and discharge techniques to alter the woven fabric further, and sometimes, as she did with *Stone Gate*, 1991, sections are pieced together in an assembled composition.

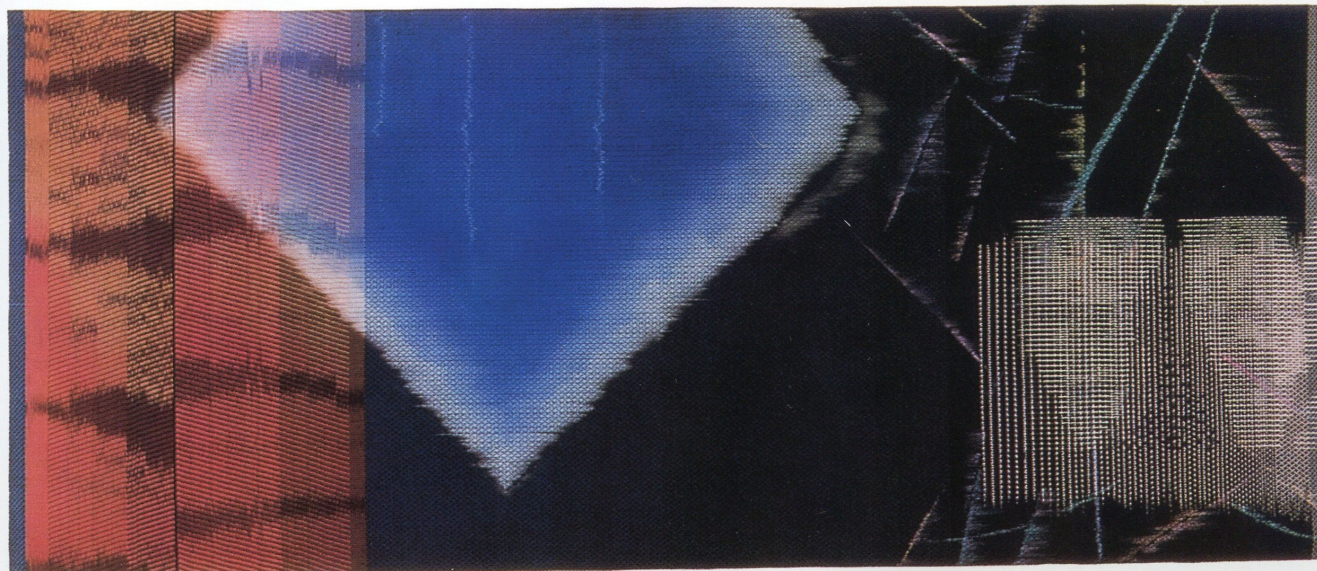
Though seeming abstract for the most part, Emily Du Bois' imagery is generally landscape-related. She says: "The imagery in my work is based on patterns in nature that reveal energy, growth, or motion. Clouds show the movement of the wind, the patterns on shells indicate how they grew, and water ripples tell us about hidden rocks. These are all indications of the Tao, just as Tai Chi Chuan reveals the flow of energy through the human body. I'm particularly interested in correspondences between various natural substances,—for example, feather markings that look like cloud formations. We can also see evidence of the interplay of Yin and Yang at every

level from microscopic to macroscopic, by looking at patterns and structures in nature."<sup>21</sup>

That one is often put in mind of video screen imagery makes it seem eminently natural that Emily is interested in computer image processing and sees it as analogous to weaving. "Structure and surface are created simultaneously," she points out. "Like computer-scanned photographic images, the woven fabric is constructed row by row, each thread carrying its dyed bits of information, light and dark values that build into patterns, organizing themselves to the eye as images."<sup>22</sup> The connection between the Jacquard loom cards and computers is often cited, but Emily also connects the up/down binary function of the warp to that of the computer and to the opposites of Yin/Yang and the broken and unbroken lines of the *I Ching* hexagrams.

For her part in the Philadelphia Jacquard Project, Emily created *Twenty-four Frames*, a consummate work which brought together many of her threads of thought and inspiration. Using the limitation of the 14 inch repeat to her advantage she made an edition of three out of the loom run which had unlimited extension, the width of the repeat becoming the height of the piece and 24 feet being the length to which she extended it. The work<sup>23</sup> is a woven photo-collage of her own weavings, weave drafts and samples, baskets, a loom, and ethnic fabrics, with Tai Chi and Chinese holographic body reflexology diagrams,<sup>24</sup> and photographs of nature culled from various sources, including *Sensitive Chaos*. While being a





Emily DuBois  
*Approach*  
Woven, ikat dyed,  
60" x 132", 1990.

marvelous compendium of Emily's lifework to date (comparable to Marcel Duchamp's *T'um* of 1918), it illustrates Schwenk's words:

*In all things great and small the whole of nature is interwoven with interpenetrating rhythms and movements, and forms are created in the interplay between them. Form patterns such as those appearing in waves with new water constantly flowing through them, picture on the one hand the creation of form and on the other the constant change of substance in the organic world.*<sup>25</sup>

A fractal/tree and a diagrammed spiral which she included recall recent scientific formulations of the insights Schwenk gained about nature by studying it. He started with the basic idea that water, which is part of all organic matter, is "continually striving to return to its spherical form"<sup>26</sup> and is in constant movement, drawn by the pull of gravity to seek its lowest level. He observed the way water is continually shaping matter in waving, spiraling, curving forms, from meandering rivers, and curling waves to inner ear cochlea, snail shells, and the chambers of the heart. (The perfect relevance of the Yin/Yang symbol was surely not lost on either Schwenck or his reader DuBois.)

Responding to recent scientific interest in chaos theory (Schwenk's breaking wave, in essence), strange attractors (like waves, again, self-similar, but never exactly repeating), fractals, folds, and the "Butterfly Effect" (wherein the insect's flapping wings are magnified into a hurricane on the other side of the globe by the inter-

action of flowing water and air) and all the other recent Complexity Theories that deal with an unpredictable "jumping universe," Charles Jencks connects the new view of nature to that of Asian religions, specifically Buddhism and Taoism. Emily DuBois makes the same connections in her work, which Jencks inadvertently described when he outlined the criteria for architecture appropriate to today's worldview:

1. Look into nature for your forms and use a computer to realize them.
2. Incorporate chance. Use order and chaos, multivalence and complexity.
3. Celebrate diversity, variety, and bottom-up participatory systems which maximize difference.
4. Use collage, radical eclecticism, juxtaposition and recent superposition.
5. Double code ecological and political concerns with aesthetic and conceptual ones.
6. Look to science for disclosures of the Cosmic Code.

"A cosmogenic architecture [art] must embody imagination in action, it must dramatize creative processes, or it is nothing." Jencks writes, ending his book. "Its spiritual role is to portray the laws and be emergent—that is surprise."<sup>27</sup>

A marvelous, strangely moving and resonant recent work by Emily DuBois, *Ancestor*, 1998, epitomizes and fulfills all these criteria. Superimposing a new, "pixelated" image by rewoven materialization<sup>28</sup> on what appears to be a fragment of ancient tapa cloth she conjurs up video screens, sound waves, and ancient ancestor

Emily DuBois  
*Pele's Tears* (detail)  
Computer aided  
weaving, ikat  
and shibori,  
25" x 33", 1991





Emily  
DuBois  
*Ancestor Tapa*,  
Ildyed double  
weave, 24" x  
21", 1998.

bundles. Tying distant centuries and cultures together and combining chance and control in this way, she achieves her goal of "trying to access something powerful but unseen."<sup>29</sup> She does this by interlocking different systems of dying and weaving and letting the images emerge spontaneously as marks of those processes. "When ma

interterials, process and concept come together in harmony, there is a sense of life or breath in the work," she says.<sup>30</sup> It seems the weaving process and Emily DuBois' holistic vision are in sync with the universe. (See page 52 for Footnotes.)

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