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The Place Where Math and Art Meet

Dorothea Rockburne spent a tumultuous year wrestling with the decision of whether to be an artist or a scientist – when she was 13. More than 60 years later, the two subjects still seem entwined. Even though she made a career for herself in creating visual art, her respect for and fascination with mathematics and science was never diminished. Quite the contrary, her passion for these disciplines is a driving force in her work, which will be showcased in a large-scale retrospective at the Parrish Art Museum this summer.

Rockburne's work has been exhibited at MoMA, the Met and the Whitney, as well as many other museums around the world. And while she's had retrospectives on smaller scales, "I've never had a big retrospective like this," she says.

"It's wonderful. I've had a chance to really review all the work I've done," said Rockburne in an interview this week. "You do the work, and you don't really join the threads exactly. You don't stop for long enough."

A retrospective is just that: an opportunity to stop and look at what your career has been, what themes come back again and again, how you've grown and how you haven't.

"What keeps recurring [in my work]," says Rockburne, "is my interest in Egypt, the Egyptian notion of proportion."

From Egypt, Rockburne's interest grew to explore the ideas of other ancient cultures like Greece and Rome. Philosophers like Plato and Pythagoras found their way into her paintings. The materials she works with, including sheet metal, crude oil, cardboard, and graphite also recall industry and mathematics.

At the Parrish, 50 pieces will be on display in a precise order that has nothing to do with chronology.

"Arranging work chronologically is standard," says Alicia Longwell, chief curator at the

Parrish. "But in Dorothea's case we wanted to do something different because the work is seemingly disparate. On the face of it, people will wonder how one led to the other. We wanted to show the seamlessness of this career — a rigorous, intellectual pursuit. To show the works in this way will help us grasp the whole arc of the career."

Because of the recurring themes in Rockburne's work, there will be plenty of opportunities in the exhibition to highlight and juxtapose ideas. For example, one large painting, "Narcissus" (1985) actually contains a smaller rendition of another work, "Inner Voice" (1983). These two paintings will be on opposite walls, facing each other, in the space.

"It's this concept of perspective," says Rockburne. "It's as though the painting is looking through itself at itself."

Rockburne was born and raised in Montreal, and she was classically trained at the Ecole des Beaux-Arts and the Montreal Museum School. But it was when she moved to North Carolina to study at Black Mountain College that she was influenced by mathematics. Max Dehn, one of Rockburne's teachers who studied with Einstein, inspired her to see math in everything.

"She took this to heart," says Longwell, "and once she moved to New York, she was engrossed by it."

Math and art are often seen as almost opposing forces, as if math was cold and art warm or math was hard and art soft. But Rockburne, an older woman with warm eyes and a painter's sensitivity, proves this to be untrue.

"Throughout ancient philosophers into contemporary philosophy, there's a thread of humanism that winds," she said. "That thread is handed down from Egyptian wall paintings through the Renaissance. Math, when it's done well, isn't cold. It's a very emotional subject. All the mathematicians I've met are very passionate and excited by life, and what they're doing, and how things tick."

Still, when art-lovers discover that much of Rockburne's work is based on higher mathematics, they become intimidated. To this, Rockburne said, "You don't need to know the composition of water to swim in it. Often because people have a math phobia, when they understand there's a math and philosophy basis to my work, they become inhibited. That's not the point. The point is to stand in front of it and let yourself feel. You don't think about H_2O before you dive in the water."

So understanding the Pythagorean theorem is not a prerequisite for understanding Rockburne's work.

"Everybody understands it in their own way," she said. "They understand it from a humanist basis. We don't paint for monkeys. We paint for each other." Dorothea Rockburne: In My Mind's Eye will open at the Parrish Art Museum on Sunday, June 19 and will remain on view through August 14. There will be an opening reception Saturday, June 18 at 6 p.m. EMILY J. WEITZ