

Sarah Bianco / Joseph Connell

By Sarah Bianco

Having an opportunity to collaborate with a scientist on an art project was in itself interesting to me. I was curious about where physics and my intuitive style of painting would overlap and hopefully inspire new work. Upon meeting Joseph Connell, “Zippy”, I immediately got excited to see what was to come from this experiment. We talked for hours, and it became clear that though our tools may be different, both of our lives were committed to attempting to understand some of the great mysteries of the Universe.

Our correspondences thereafter were filled with introductions to so many fascinating scientific concepts and much of our discussions were on the nature of relationships. We eventually decided to depict wave functions and the uncertainty principle, with an underlying narrative of our personal examinations within the project itself.

The paintings contain themes of the unknown, which is a common thread throughout my work. Full of contrasts, they illustrate distinguishing characteristics of each of us while containing deeper metaphoric explorations of consciousness, union and surrender. It was a joy connecting with Zippy. Our creative and introspective conversations were truly inspirational to each other's lives and work.

By Zippy Connell

I have always wondered how I could use surfing to teach quantum mechanics, and Sarah was up for the challenge. We can imagine a surf break being described by a complicated wavefunction. Before checking the waves, you imagine the conditions resembling the other experiences you have had there. There is a chance that you'll find huge waves, small waves, or none at all. In quantum mechanics there is inherent uncertainty measurements, and when you make an observation, only specific outcomes are allowed.

We can also apply this concept to our relationships. Imagine a close friend of yours. You never know what mood they will be in before you see them, but say they are funny 75% of the time, and sad 25%, for example. They are a superposition of funny and sad, and when you see them, they will be one or the other.

Sarah's big painting is a complicated wavefunction, a superposition of many simple waves. The simple waves are the possible outcomes of a measurement (hence the "quanta" of quantum mechanics). The smaller paintings represent a few observations, or measurements, of the wavefunction. You can know how often you get a certain result on average, but not what an individual measurement will yield, so the outcomes are uncertain (Heisenberg's uncertainty principle). Sarah also included a bubbly interpretation of our emergent deep friendship in the paintings.