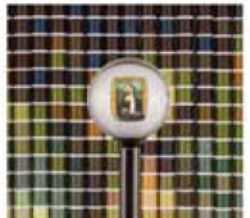




**CLICK TO ENLARGE**  
 Chuck Close revolutionized the way we view portraiture.



**CLICK TO ENLARGE**  
 New York artist, Devorah Sperber, discusses how the human brain perceives the visual world.



**CLICK TO ENLARGE**  
 Using 5084 spools of thread, Devorah Sperber shows a new take on the Mona Lisa with her abstraction, "After the Mona Lisa 7."



**CLICK TO ENLARGE**  
 New York artist, Devorah Sperber, installs "After the Last Supper" at the Brooklyn Museum.



**CLICK TO ENLARGE**  
 New York artist, Devorah Sperber, used 1102 colorful spools of thread to create "Spock 1," which can be seen clearly through a viewing sphere.

**Scientists and Artists Explore Visualization at World Science Festival**



Kurt Andersen hosts a discussion on visual perception with artists Chuck Close and Devorah Sperber and [neuroscientists](#), Margaret Livingstone, Christ Tyler and Ken Nakayama.

**NEW YORK**—It's not too often the sound of robotics fills a city park typically reserved for dog walkers, or tickets sell out for an evening discussion of neurobiology. But that's what happened last weekend at the World Science Festival in New York City, the annual event celebrating science and its influence in [entertainment](#), philosophy, medicine and art.

For the panel, "Portraits of Perception: The Human Face," scientists and artists took to the stage to talk about the intersection of their respective fields in the extraordinary, but effortless, act of seeing. We view the world with such ease that we forget how impressive the visual process is. And yet, it still comes down to basically this: "If you think about it, the only thing up there is a bunch of neurons. And the neurons are either firing or not firing," says Margaret Livingstone, Professor of Neurobiology at Harvard Medical School.

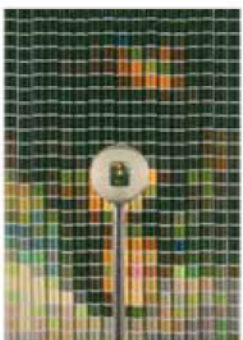
The human brain extracts relevant information from faces and objects, something artists have learned to take advantage of. "If you ask a 3-year-old child to draw a person, you're going to get a head on legs, right?" Livingstone asks. "This tells us that the way we represent people isn't by a visual photograph. The child draws what's important to them."

Artist Devorah Sperber agrees. Sperber creates optical illusions from famous masterpieces, which allows viewers to take away from her artwork what they perceive as important or familiar to them. Her pieces, some made from thousands of colorful spools of thread, hang flat against a blank wall. At first glance, they are merely inverted abstractions, but people instantly identify the popular paintings when using a viewing sphere. The viewing sphere distorts Sperber's work by giving it a fisheye effect, meaning that the center of the artwork appears larger to the viewer and the peripheral objects seem smaller.

Livingstone recognizes that artists were studying the different ways humans perceive images long before biologists. While scientists primarily focus on the biological aspect of vision and perception, artists have been discovering new techniques for fooling the eye.

"Painting is a form of transcending physical reality," artist Chuck Close says. And in reality, a painting is "just colored dirt on some cloth wrapped around some wood sticks... Paintings can make you feel warm inside or they can make you cry, but in the end, it's just colored dirt." —Linda Yin

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**CLICK TO ENLARGE**  
 Devorah Sperber used over 400 spools of thread to create "After the Mona Lisa 1," which can be seen clearly through a viewing sphere.



**CLICK TO ENLARGE**  
 To create "After Vermeer 2," New York artist, Devorah Sperber, used 5024 spools of thread. World-renowned artist Chuck Close discusses his painting process at the World Science Festival event, "Portraits of Perception: The Human Face."



**CLICK TO ENLARGE**  
 World-renowned artist Chuck Close discusses his painting process at the World Science Festival event, "Portraits of Perception: The Human Face."



**CLICK TO ENLARGE**  
 Margaret Livingstone, Professor of Neurobiology at Harvard, explains the relationship between neuroscience and the arts.