

Modern “cathedral” offers artistic inspiration

David J. Harris, *Science Writer*

Grandeur is often associated with feats of architecture and engineering. It’s not often applied to scientific experiments. One notable exception is the Large Hadron Collider (LHC), a particle accelerator and collider complex at CERN, the European Organization for Nuclear Research, outside Geneva, Switzerland. Artist Jonathan Feldschuh was so fascinated with the massive instrument’s physical beauty that he created a series of more than 40 paintings detailing the LHC’s various angles, patterns, and vantage points. “I wanted to capture the grandeur,” he says, “in terms of the intellectual project and the physical structure.”

Feldschuh does so via large ink and paint pieces, seven of which were recently on display at the National Academy of Sciences in Washington, DC. Most paintings in the series are quite large at ~84 × 36 inches. Those proportions reference the format of Cinemascope, a lens system for shooting widescreen movies. Indeed, the pieces have a dimensionality and sense of movement that is almost cinematic.

Physicist Victor Weisskopf, director-general of CERN in the 1960s, once referred to particle accelerators as the “gothic cathedrals of the 20th century” (1). That description feels particularly apt when looking at Feldschuh’s *Large Hadron Collider #24*, 2009 (Fig. 1), which shows the empty cavern ready for installation of the Compact Muon Solenoid experiment at the LHC. Another piece, *Large Hadron Collider #27*, 2010 (Fig. 2), shows a geometry and color palette akin to that of Da Vinci’s

Last Supper, a further allusion to a sense of awe and mystery. (Feldschuh confesses that he didn’t aspire to emulate the dimensions of *The Last Supper* but realized the uncanny evocation when a viewer pointed it out to him.)

Technique Matching Content

The pieces in this series are painted on both sides of sheets of Mylar, a tradename for boPET (biaxially oriented polyethylene terephthalate), which has traditionally been used for architectural drawings, among many other applications. On the obverse side is a painted representation of the architectural elements of the LHC. The reverse carries a splatter painting made by dropping paint from a ladder onto the Mylar, reminiscent of Jackson Pollock’s splatter paintings of the 1940s.

“This fluidity suggests not only the moment of impact when the particular accelerator is in use,” says Elizabeth Weinstein, director of Interpretation for Art and museum curator at the Louisiana Art and Science Museum, “but also lends an emotional dimension, conveying a mysteriousness that reminds the viewer of the machine’s purpose: to explore the boundaries of the unknown.”

Interestingly, Feldschuh himself has never been to the LHC or to other accelerators, such as the linear accelerator at SLAC National Accelerator Laboratory, in California (a painting of which, *Large Hadron*



Fig. 1. This Jonathan Feldschuh painting, *Large Hadron Collider #24*, evokes the feel of a cathedral via the massive machinery of the LHC. Image courtesy of Jonathan Feldschuh (artist).

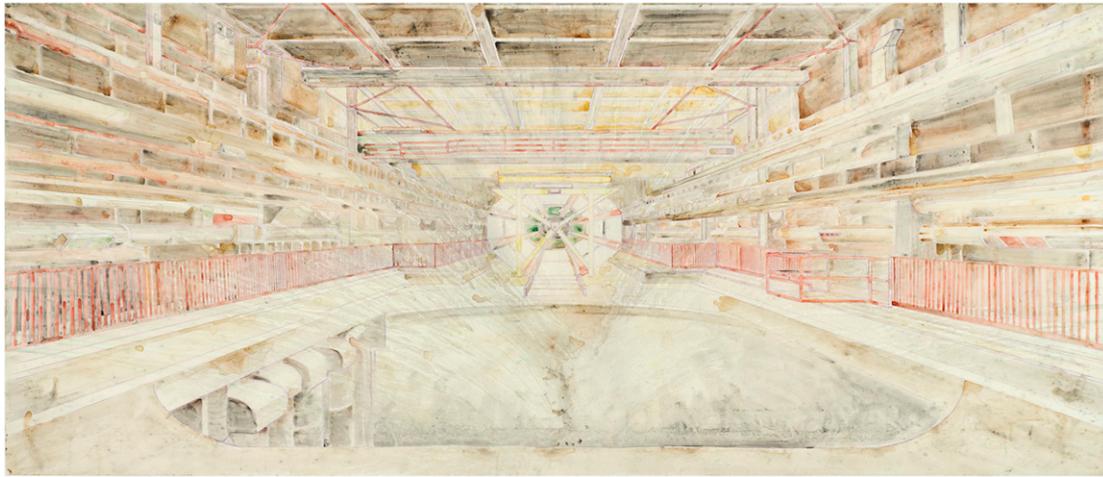


Fig. 2. Some viewers have suggested that in this painting from Feldschuh, *Large Hadron Collider #27*, the proportions of the shapes and lines are reminiscent of those from Leonardo Da Vinci's *The Last Supper*. Image courtesy of Jonathan Feldschuh (artist).

Collider #31, 2011, is included in the series). Feldschuh would love to visit the locations he only knows from the high-resolution photographs he has used as models for his paintings. Indeed, he aspires to show his work at CERN or in Geneva someday.

An Education in Abstraction

Feldschuh has a degree in physics from Harvard University, but earning that qualification wasn't without its challenges. While an undergraduate student of theoretical particle physicist Howard Georgi, Feldschuh had what he calls an epiphany: the study of physics was not his life's path beyond the college level. Georgi was young, charismatic, and in Feldschuh's words, "the god of his field." Feeling unable to follow in such large footsteps, Feldschuh turned to some of his other interests and enrolled in many classes outside physics, with an emphasis on art, a decision that, he says, "pleased nobody at Harvard, including my physics advisor, who nearly refused to sign my course card."

Feldschuh went to Prague for three years, where he received a classical education in painting and learned to draw a figure (an optional technique at Harvard that was not given particular emphasis). "Unlike western Europe, which had largely dismantled the training of classical artists," he says, "eastern Europe has all these incredible artists."

Feldschuh didn't emerge from his art training wanting to make art about science; his work was actually abstract in style. But Feldschuh started to realize, he recounts, that science was part of the way he

sees things. "And that came out more and more in my work," he notes, "and that is just where I've gone."

Feldschuh enthusiastically embraces his scientist audience. "Scientists are excited to see serious artworks about what they do," he says. "Most scientists have a sense of beauty and elegance that is innate" and, he adds, "art resonates with that sense." Weinstein says that scientist viewers of works such as Feldschuh's tend to easily identify "valuable insights that even the most learned artist does not necessarily recognize as being there."

Feldschuh believes, however, that the art world writ large has little time for science-art. "I'd like to think my work is participating in a broader dialogue of what is happening in art," he says, "but have accepted that some people won't be interested in it because of the subject matter."

But the science-art world has taken notice. "I see his LHC series as an aesthetic investigation, and celebration, of one of the most important scientific instruments ever invented," says Julia Buntaine, editor-in-chief of *SciArt in America*, commenting on Feldschuh's work. "The splatter/drip techniques mimic the energy and movement of the particles whirring around within the accelerator."

Not many people will have a chance to go underground in the LHC tunnels and chambers to see the subject matter of Feldschuh's paintings. But if he's successful, he'll deliver viewers a sense of the massive accelerator on canvas, capturing the grandeur of the location, and bringing to life the dynamism and movement of what would otherwise be, for many, little more than a very complex scientific instrument.

¹ Krauss LM (2006) Discovery for the sake of discovery. Available at seedmagazine.com/content/article/discovery_for_the_sake_of_discovery/. Accessed June 27, 2016.