

**ARTIST JOSIAH MCELHENY CREATES “BIG BANG” SCULPTURE
FOR WEXNER CENTER EXHIBITION *PART OBJECT PART SCULPTURE*
Residency Award Provides Collaboration with OSU Astronomer—
Offers Studio Facilities for Film Component of Project**

When the renovated Wexner Center for the Arts reopens October 28-30, the major offering in the visual arts will be *Part Object Part Sculpture*—an exhibition whose culminating work is a luminous glass-and-metal sculpture by artist Josiah McElheny commissioned through the Wexner Center Residency Award program.

Titled *An End to Modernity*, the sculpture is a dazzling and dauntingly complex assemblage of radiating spokes and approximately 1,000 glass globes and discs, which were blown by McElheny himself with two assistants. Shooting off in all directions from a central aluminum core, the glass pieces (and 75 lamps) form a bristling, brilliantly lit ball, roughly 15 feet wide and 12 feet high. Viewers may interpret the sculpture as a crystal chandelier, hung incongruously low so that its core is at eye level. Or, just as appropriately, they may see *An End to Modernity* as a scientifically accurate representation of the expansion of the universe following the Big Bang.

So that he could enrich the latter reading with scientific content, McElheny took advantage of his Residency Award to enter into collaboration with Ohio State University professor of astronomy David H. Weinberg. The artist and the astronomer began meeting in September 2004 and eventually had some 20 face-to-face work sessions, augmented by telephone calls and a continual stream of e-mail. As a result, says Weinberg, *An End to Modernity* “has quite a lot of detailed correspondence between

what's represented in the structures of the sculpture and the way things actually formed in the universe.”

“After all our work together,” says McElheny, “the sculpture ended up looking remarkably like the original sketch, except that its specifics are now infinitely more complicated and interesting and full of information.”

Background to a Collaboration

According to McElheny, the project for *An End to Modernity* began some five years ago, when he recognized “a hidden confluence” between two concurrent events, one of them in the realm of art and design, the other in science. The first event was the creation in 1965 of the crystal chandeliers for The Metropolitan Opera, designed by Hans Harald Rath of the Viennese firm Lobmeyr. Rath's design responded to a request from architect Wallace K. Harrison for chandeliers with a dynamic Space Age look. The second event, which also took place in 1965, was the publication by Arno Penzias and Robert Wilson of Bell Labs of the first experimental evidence confirming the theory of the Big Bang: the expansion of the universe from an ultra-dense, ultra-hot state.

Whether encountered in the Penzias-Wilson scientific paper or in the Rath-Harrison chandeliers, “An explosion outward from a single source could be viewed as the last image generated by modernism,” says McElheny. Soon after 1965, he notes, “Modernism splintered, as it absorbed the idea that there may be infinite starting points for infinite versions of history.”

With this idea in mind, and with an initial sketch for a sculpture, McElheny began working to infuse his project with specific scientific information. Enter OSU astronomer professor David Weinberg, who teaches the Big Bang theory, does research on the formation and clustering of galaxies, and is a frequent visitor at the Wexner Center with his wife, OSU art history professor Lisa Florman. Through a confluence of interests that

is *not* coincidental, but is in fact one of the distinctive aspects of the Wexner Center, *Part Object Part Sculpture* curator Helen Molesworth was able to put McElheny in touch with Weinberg.

“Josiah had a genuine interest in establishing a scientific connection,” Weinberg says, “and he was already aware of one of the conceptual problems of making the sculpture. The Big Bang was not an explosion of stuff into space, as people tend to think of it, but rather an expansion of space itself. As we talked, the solution emerged: The distance from the center of the sculpture would represent time, not space. As you move out from the core, you’re moving into later phases of the universe.”

The clusters of glass pieces represent clusters of galaxies, which change form and grow in size and complexity as the radiating spokes reach closer to the “present day” at the sculpture’s outer boundary. The lamps represent quasars, the most luminous objects in the universe, which first appeared 100 million years after the Big Bang, grew to maximum intensity when the universe was 2 to 4 billion years old, and then faded toward the present.

“One of the features of the sculpture that made this idea work,” Weinberg continues, “was Josiah’s plan to create a central aluminum sphere with rods coming out of it. That sphere lent itself very easily to representing a phenomenon called the last scattering surface. For the first half million years or so, the universe was opaque to visible light, like a fog or a cloud. Then, as the universe expanded and cooled, the electrons that had been scattering the light were absorbed into hydrogen atoms, and the universe became transparent. The metal skin of Josiah’s central sphere makes a great analog for the surface of time beyond which the universe was opaque.”

Other choices in making the sculpture turned out to be more challenging. “The work was ten times more complicated to manufacture than either of us had imagined,” McElheny says. “The universe is isotropic, so there should be no pattern to the way the

sculpture's galaxies radiate outward. But it's hard to avoid making patterns—and even harder to place the elements randomly and yet keep them from interfering with one another. David spent a lot of time writing computer programs to make sure the rods and glass pieces didn't run into each other. And then, if it turned out the fabricators needed 1/8 inch more space between a pair of rods, the entire sculpture had to be redesigned.”

Adding Film to the Project

As if creating the sculpture were not challenging enough, McElheny also decided to add a second element to the project: a short film titled *Conceptual drawings for a chandelier, 1965*.

Shot in the lobby and auditorium of The Metropolitan Opera, the film shows the Lobmeyr chandeliers from many angles, both distant and close, turning the objects into an abstract play of light, at once Space Age and Gilded Age. Intercut with the images of the chandeliers are black-and-white diagrams that describe aspects of the history of the universe. Divorced from their mathematical and scientific context, these diagrams turn into abstract drawings that suggest the beginning sketches for the chandeliers.

To make the film, McElheny collaborated with cinematographer Adolfo Doring (*Capturing the Friedmans*), who used a super-16mm camera and a recently developed film stock, Kodak 7218, that enabled him to shoot with available light. The soundtrack is by noted media-art innovators Beth Coleman and Howard Goldkrand of SoundLab. Their work for this film is based in part on a project by University of Virginia astronomer Mark Whittle, who has converted cosmological data into a soundscape of the universe expanding and cooling.

McElheny did postproduction on the five-minute film using the Wexner Center's Art & Technology studio. This extraordinary facility offers residencies to approximately 25 artists a year and has supported more than 250 national, international, and regional

artists since its inception in 1989. In the Wexner Center reopening exhibition, *Conceptual drawings for a chandelier, 1965* will be shown in a room adjacent to the sculpture *An End to Modernity*, projected as video with multichannel sound.

Born in Boston, Massachusetts, Josiah McElheny was educated at the Rhode Island School of Design (BFA, 1988), studied with master glassblower Ronald Wilkinson and apprenticed for a number of years to master glassblowers Jan-Erik Ritzman, Sven-Åke Carlson, and Lino Tagliapietra. Significant exhibitions and projects have included *A Labor of Love*, The New Museum of Contemporary Art, New York (1996); *At Home in the Museum*, The Art Institute of Chicago (1998); *An historical anecdote about fashion*, The Henry Art Gallery, Seattle (1999) and the Whitney Biennial, Whitney Museum of American Art, New York (2000); *Metal Party*, Public Art Fund, New York and Yerba Buena Center for the Arts, San Francisco (2001); and *Total Reflective Abstraction*, Donald Young Gallery, Chicago.

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