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Alyson Shotz (American, born 1964)

Fabricated by Daryl Smith (American, born 1961)

## Untitled

New Haven, 2007

Flameworked Pyrex, 13 × 11 × 12 in. (33 × 27.9 × 30.5 cm)

Yale University Art Gallery, Gift of the artist, 2007.184.1

Before establishing herself as an artist, Alyson Shotz studied geology, with a focus on glaciology. These interests have become a recurring theme in her work as she mines, and sometimes undermines, ideas drawn from natural science. This work is the first sculpture Shotz made completely from glass. The medium relates both to the scientific principle the sculpture depicts and to the physical space of a laboratory. In 2005–6 Shotz was a Happy and Bob Doran Artist in Residence at the Yale University Art Gallery. During that time, she encountered John Wettlaufer, the A. M. Bateman Professor of Geophysics, Mathematics, and Physics at Yale, and they discussed his research on grain-boundary melting in ice. As Wettlaufer describes the phenomenon, “Like bubbles in foam, an ice cube or a glacier consists of many individual crystals, separated from each other by boundaries where liquid persists, even though the temperature is below freezing. The symmetry of the liquid network is controlled by the crystal structure and writhes through the ‘solid’ ice.”<sup>1</sup>

Shotz re-created the network of liquid channels using glass, leaving the negative space to constitute the ice crystals. The work confounds the viewer’s expectations for the medium: static glass represents flowing water, and gaseous air represents hard ice. As Wettlaufer has observed about this sculpture, “Common experience is that glass is the solid that holds water, not the reverse.” Additionally, the use of glass produces another subtle twist: despite the visual similarities between glass and ice, the noncrystalline structure of glass actually makes it more akin to

water than to ice.<sup>2</sup> Shotz’s sly playfulness subverts a scientific principle and then subverts the subversion, resulting in an abstraction that is informed by the close study of nature. “Shotz challenges traditional notions of sculpture as closed, massive, or weighty,” Jed Morse has noted. “Her airy, open-form sculptures define volumes without mass and draw upon an aficionado’s interest in science to investigate the finer points of our perception and experience of the physical world.”<sup>3</sup>

Shotz further engaged with science in the fabrication of the sculpture. It is made from Pyrex, Corning’s brand of borosilicate glass, a common material for laboratory equipment—the beakers, vials, and petri dishes used to examine the physical world. Daryl Smith, Senior Scientific Glassblower at Yale’s Sterling Chemistry Laboratory, executed the sculpture to Shotz’s specifications, using Pyrex rods that were drawn out and joined by flameworking. Smith regularly creates specialized apparatus for scientific experiments, either by inventing them from scratch or adapting commercially available items. In this manner, Shotz’s intellectual investigation of a scientific phenomenon is materially tied to the equipment and spaces where such phenomena are studied. Shotz has continued to explore glass, most notably as an artist in residence at the Pilchuck Glass School, in Stanwood, Washington, in 2009.

<sup>1</sup> John Wettlaufer, email message to the author, July 21, 2017.

<sup>2</sup> Alyson Shotz, email message to the author, March 13, 2017.

<sup>3</sup> Jed Morse, *Sightings: Alyson Shotz*, exh. cat. (Dallas: Nasher Sculpture Center, 2010), n.p.