Shigeru Ban: A Paper Arch
April 30-August 1, 2000
The Abby Aldrich Rockefeller Sculpture Garden

In his first project in the United States, Japanese architect Shigeru Ban builds a monumental lattice "roof" made entirely from paper tubes over The Museum of Modern Art's Abby Aldrich Rockefeller Sculpture Garden. Shigeru Ban: A Paper Arch was organized by Matilda McQuaid, Associate Curator, Department of Architecture and Design, and is on view from April 30 through August 1 as part of Making Choices, the second cycle of MoMA2000.

Ban transforms the Garden into an outdoor room with a massive trellis or roof proportional to the size of the trees and the surrounding buildings. The nine-ton arch stretches 87 feet across the Museum's Sculpture Garden, and yet, despite its delicate appearance, it is strong enough to withstand the elements. The tubes' weight and the structure's geometry cause a natural bending, resulting in the arch. Ban refers to paper as "evolved wood" and prefers it over wood as a building material because it is less expensive and lighter, can be made fireproof and waterproof, and is recyclable.

"There is a tradition of building houses and structures in the Sculpture Garden, which has enabled architects and designers to test new ideas and building technologies on a one-to-one scale," says Ms. McQuaid.

Ban began experimenting with paper tubes as a primary building material in the mid-1980s, and may be best known for his paper tube housing created in the aftermath of the Kobe, Japan, earthquake in 1995. As a humanitarian and an architect, Ban felt indirectly responsible for the deaths caused by collapsing buildings, and offered to build temporary housing for those who lost their homes in the earthquake. Ban provided a dignified place for Kobe's residents to begin rebuilding their lives--the simple yet highly functional homes were inexpensive, waterproof, fireproof, and could be built by volunteers. They were constructed with walls of heavy paper tubes, canvas roofs, and foundations made from sand-filled beer crates that protected the homes from flooding. Ban's largest paper tube structure to date, the Japanese Pavilion for the 2000 Expo in Hannover, Germany, is a sinuous domed pavilion made of paper tubes covered by a paper membrane. In accordance with the main theme of the exposition, environmental conservation, the entire structure will be recycled.

Although paper has been used for centuries in Japanese textiles and interiors, it is only in recent decades that paper tubes have been used in the construction industry. Rather than filling the tubes with concrete, as is typical in construction, Ban uses only the 32-ply cylinder itself, which allows the material to stay flexible and to take on a variety of shapes.
The paper tubes for the arch were manufactured in Düren, Germany, and shipped to Queens, where the structure was assembled and then cut into eight segments, transported to the Museum, and lifted by crane over the wall of the Sculpture Garden. The segments were spliced together, secured to the Garden wall, and attached to welded plates on the Museum facade. The entire structure will be recycled at the end of the exhibition. The paper arch follows a tradition of commissioned structures in the Garden, from Buckminster Fuller's Dymaxion Development Unit (1941) to Marcel Breuer's The House in the Museum Garden (1949) and Junzo Yoshimura's Japanese House (1954-55).

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