



Co-Structure, Version 3, Hommage à Roberto Frucht

Anthony Hill

On display

Title/Description: Co-Structure, Version 3, Hommage à Roberto Frucht

Artist/Maker: Anthony Hill

Born: 1970 - 1975

Object Type: Sculpture

Materials: Stainless Steel

Accession Number: 31599

Historic Period: 20th century

Production Place: Britain, England, Europe

Credit Line: Bequeathed by Joyce and Michael Morris, 2014

Three different thicknesses of stainless-steel tube have been used to distinguish three distinct geometric configurations within this free-standing structure. Each configuration relates to a mathematical 'tree' with seven points and six lines, used in graph theory.

Anthony Hill's description of *Co-Structure, Version 3, Hommage à Roberto Frucht* highlights the significance of mathematics to the conception and construction of this work:

'It is a representation of an abstract 3-polytope made with all edges of equal length. The 3-polytope is the smallest asymmetric polyhedron all of whose faces are 'triangles'. The eighteen edges comprise a partition into three sets of identical trees, the smallest asymmetric tree. The trees have been distinguished by giving each set edges of differing thicknesses. The work is dedicated to the mathematician Roberto Frucht, who was a pioneer in the field of groups of graphs and with whom I was then corresponding.' [1]

Mathematical structures had provided Hill with a useful starting point for composing non-figurative art works since the late 1950s. He described the process as putting abstract mathematical notions 'to work', by combining measured modulations with his own artistic decisions. [2] Hill published his research into combinatorial mathematics and graph theory in the 1960s and was appointed as an Honorary Research Fellow in the Mathematics Department of the University of London in 1970.

The mathematical tree with six lines and seven points informed many of Hill's works in the 1970s, including 31540 and 31600 in the Sainsbury Centre Collection. In 1977 he published an article about this connection which refers directly to these works and includes an illustration of his stainless-steel *Co-Structure*. [3]

Lisa Newby, March 2021

[1] Alastair Grieve, 'The development of Anthony Hill's work from 1950 to the present', *Anthony Hill, A Retrospective Exhibition*, exh. cat. (London: Hayward Gallery, 1983), p. 56. *Co-Structure, Version 3, Hommage à Roberto Frucht* was included in the exhibition (Cat. No. 79) and is illustrated on p.55.

[2] Anthony Hill, 'A View of Non-Figurative Art and Mathematics and an Analysis of a Structural Relief', *Leonardo*, Volume 10, No.1 (Winter, 1977), pp. 7-12.

[3] Ibid. *Co-Structure, Version 3, Hommage à Roberto Frucht* is illustrated on p. 9.

Exhibitions

Anthony Hill: A Retrospective Exhibition, Hayward Gallery, London, 1983

Further Reading

Tania Moore and Calvin Winner (eds.), *Rhythm and Geometry: Constructivist art in Britain since 1951* (Norwich: Sainsbury Centre, 2021), p.124.

Provenance

In October 1984, the University of East Anglia accepted a planned bequest from Joyce and Michael Morris (UEA Alumni). Michael died in 2009 and Joyce in December 2014 when the couple's wishes were implemented.
