

1096-06-1984 **Jonathan David Farley*** (jonathan.farley@morgan.edu), Department of Mathematics,
Morgan State University, 1700 E. Cold Spring Lane, Baltimore, MD 21251. *The Many Lives of
Lattice Theory: An Expository Talk about Geometry, Topology, and Stanley.*

Modern lattice theory, the abstract study of order and hierarchy, was born at Harvard in the 1930's, a creation of Professor Garrett Birkhoff. His colleague Gian-Carlo Rota wrote, citing a prediction of I. M. Gelfand, that "lattice theory will play a leading role in the mathematics of the twenty-first century".

Using the g-Theorem on polytopes, Bjorner proved a result about how the number of totally ordered subsets of a finite distributive lattice grows as the subsets increase in size. He then asked in 1997 if that result could be proven combinatorially.

At "the other end of the galaxy," one finds Priestley duality for distributive lattices, finite or infinite, a way of understanding distributive lattice-ordered algebraic structures by means of topology.

One day, on an airplane crossing the Atlantic, I saw these two notions collide. (Received September 17, 2013)