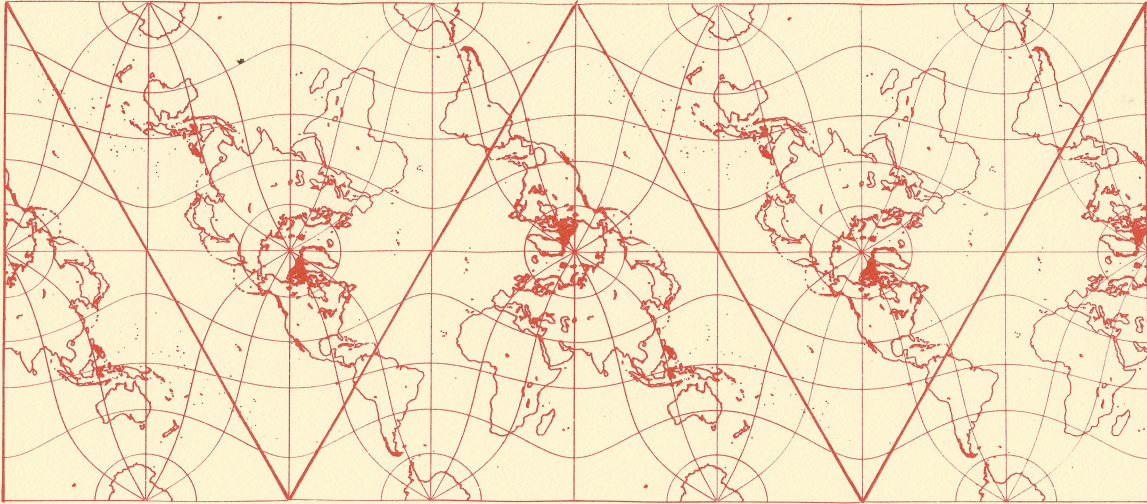# Tetrahedric Projection

Peace on Earth

The McIlroys

CONFORMAL TETRAHEDRAL PROJECTION, by D. McIlroy

Copies of these triangular maps fit together perfectly in all directions into a repeating map as endless as the globe itself. They show the whole world true to shape at all but four isolated points in the oceans, with remarkably little scale variation across the continents. To see the world in a different perspective, fold the four triangles up into a pyramid with a triangular base.

This, my favorite world map, got me started on making map greetings. The sheet folded twice makes a card with the map on the front and back and print inside. The basic triangle is a conformal map drawn on a tetrahedral "globe" then unfolded into a flat triangle.

Alternating head-up and head-down copies of the triangle tile the plane with a continuous repeating map. Singularities at the vertices of the tetrahedron bend—and may split—the passing meridians into right angles..

The tetrahedric projection was the last wallpaper map to be published, by L. P. Lee in 1965, 140 years after Abel discovered the mathematics of tiling functions. In this aspect, the projection provides a remarkably good representation of the continents drawn on a gracefully undulating grid of parallels and meridians. The nasty vertices are banished to the "empty" sea.

1983