

## **Peters Projection (Gall's Orthographic Projection)**

The need to show area relationships correctly on a world map and the simplicity of cylindrical projection has led to the development many equal area cylindrical projections with various choices of standard parallels as the lines of no distortion. The first was developed by Johann Heinrich Lambert in 1772 and used the equator as the standard parallel. In 1855, James Gall developed his orthographic projection which used standard parallels at 45° N and S. Walter Behrmann in 1910 produced an equal areal cylindrical projection with standard parallels at 30° N and S. Trystan Edwards (1953) also created an equal areal cylindrical projection, his with standard parallels at 50°E52'. In 1967, Arno Peters re-created Gall's version of the equal area cylindrical projection with standard parallels at 45° N and S and in 1973 presented it at a press conference. Peters insisted that he created the projection but cartographers recognized it as the same as Gall's orthographic.

In Gall's orthographic or the so-called Peters projection, all equatorial regions, such as Africa and northern South America, are stretched to appear about twice as long in a north-south direction as they should appear relative to the east-west directions. Thus, the less developed regions have far more shape distortion on this projection than do the industrialized regions near latitudes 45°E, which have no shape distortion at that latitude. The polar areas contain even more shape distortion. Because of the extended north-south areas near the equator, the projection has been referred to as the "hanging laundry" projection. The projection appears in the associated graphic.

Peters' claims for the panacea nature of "his" projection as a replacement for the ubiquitous Mercator caused significant concern for cartographers. One claim of Peters implied that this was the first equal area projection to be developed although it was known through his own work that he was aware of many others including Lambert's original cylindrical equal area. The second claim was that the less developed countries were finally presented in a fair manner on a world map and not as they appear on the "Euro-centered" Mercator projection (Snyder, 1993). This claim unfortunately led to the wide adoption of the projection by church groups and other organizations working with developing nations. The inappropriate use of both the Gall orthographic or "Peters" projection and pervasive Mercator led the American Cartographic Association to issue a resolution in 1989 urging publishers and other organizations "... to cease using rectangular (cylindrical) world maps for general purposes or artistic displays."

Snyder, J.P., 1993. *Flattening the Earth*, The University of Chicago Press, Chicago.