



Istituto Veneto
di Scienze Lettere
ed Arti

Stephen J. Gould's Legacy: Nature, History, Society

Venice, May 10–12, 2012

Organized by Istituto Veneto di Scienze, Lettere ed Arti
in collaboration with Università Ca' Foscari di Venezia

Guido Barbujani, Università degli studi di Ferrara

Mismeasuring man thirty years later

Abstract

Humankind has long been regarded as naturally divided into distinct groups or races, much like other animal species. Only in the second half of the twentieth century, through the work of Frank Livingstone, Richard Lewontin and Stephen Jay Gould, the race concept began to be questioned as a useful tool for understanding human biodiversity. Recent studies at the genome level have shown that we are all different, and that there are geographical patterns in human genetic variation. However, these patterns do not allow one to define clusters of biologically differentiated individuals, because each human population harbors a large share of the species' genetic diversity, and because genetic change is continuous in space, rather than interrupted by boundaries. These data explain why studies of human morphology never led to an agreement about the number and definition of human races, with proposed races numbering from 2 to 200; people can be clustered in many ways, but variation within clusters is always large, and most alleles are cosmopolitan, i.e. present, at variable frequencies, in all continents. Race remains an important component of our social and psychological world, but envisaging our species as subdivided in genetically-differentiated groups leads to poor evolutionary inference and to errors in clinical practice.