



Evolution of Fault Systems, Geometrical Controls on Earthquake Size, and the Relationship of Geodetic versus Geologic Slip Rates: Stories from Three Tectonic Environments.

steven wesnousky

Center for Neotectonic Studies, University of Nevada, Reno

The San Andreas - Walker Lane, Basin & Range, and Himalayan front are comprised primarily by strike-slip, normal, and thrust fault systems, respectively. The San Andreas - Walker Lane accommodate Pacific-North American transform plate motion and encompass the western United States. The Himalayan frontal thrust is the result of convergence between India and Eurasia. The distinctly different styles and patterns of faulting in the three regions will be compared and contrasted in the context of (1) geometrical controls on earthquake rupture dimension, (2) the evolution of fault systems, and (3) the relationship of geodetic measures of strain accumulation to geologically determined fault slip rates.