"For the mountains may be removed and the hills may shake..."

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Albeit separated in time from rifting itself, the post-rift evolution of landscapes at rifted margins is fundamentally rooted in the processes of crustal extension. During the main phase of crustal thinning at the Norwegian margin, coupling of deformation between crust and mantle left behind a linear transition that separates the part of the margin where deformation became coupled from the part where it was not. This transition is manifested in the subsurface by the outermost part of the tapering crystalline crust wedge that outlines the inner boundary of the highly thinned distal margin. We call this the taper break. It is located at a rift-related zone of permanent weakness, and acts as a point of flexural coupling that exerts a fundamental control over Scandinavian topography. The absolute height of the onshore mountain envelope is inversely proportional to its local distance from the taper break (Apparent Taper Length, or ATL). Coastal denudation, landscape elements such as the degree of preservation or excision of paleosurfaces, and fault reactivation also correlate with the ATL. Although the taper break was created around the Jurassic-Cretaceous boundary, the crust in its vicinity is seismically active at present day. Rapid loading by Plio-Pleistocene sediments augmented by onshore erosion, seaward-directed gravitational potential energy, and post-glacial rebound engender a lithospheric flexure that downwarps at the taper break. Sequential stress patterns develop, transitioning from 1) compression offshore, 2) through a neutral zone, to 3) tension at the innermost part of the proximal margin domain. There, tensile stress is sufficient to reactivate favorably-oriented faults in normal mode and to uplift their footwalls. Thus do Scandinavia's earthquakes – products of mountains long since removed – shake the hills even as they raise mountains anew.