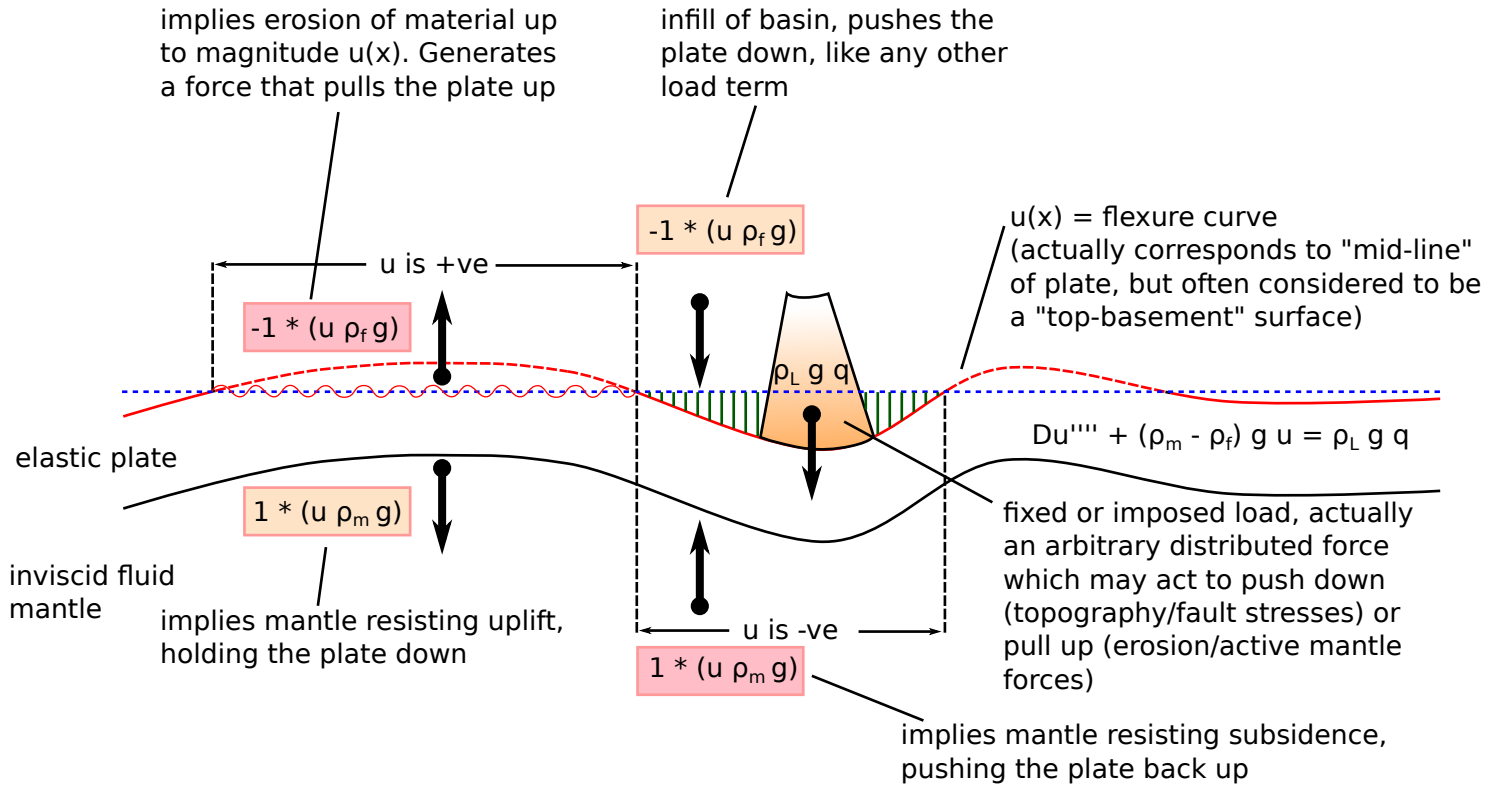
implies erosion of material up to magnitude u(x). Generates a force that pulls the plate up
infill of basin, pushes the plate down, like any other load term
-1 * (u ρf g)
u is +ve
-1 * (u ρf g)
u(x) = flexure curve (actually corresponds to "mid-line" of plate, but often considered to be a "top-basement" surface)
ρL g q
Du'''' + (ρm - ρf) g u = ρL g q
elastic plate
1 * (u ρm g)
fixed or imposed load, actually an arbitrary distributed force which may act to push down (topography/fault stresses) or pull up (erosion/active mantle forces)
inviscid fluid mantle
implies mantle resisting uplift, holding the plate down
u is -ve
1 * (u ρm g)
implies mantle resisting subsidence, pushing the plate back up