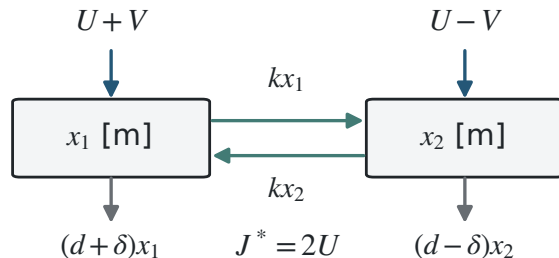


Same steady outflow, different retention and response

(a) Material balance



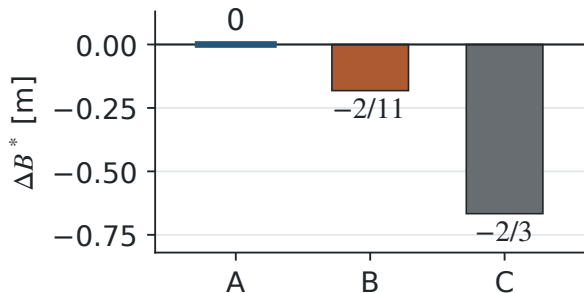
Why distribution matters

$$\dot{s} = U - ds - \delta a$$

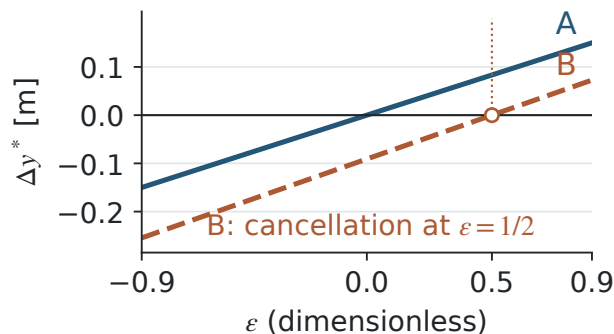
$$s = (x_1 + x_2)/2$$

$$a = (x_1 - x_2)/2$$

(b) Contrast in total amount



(c) What the sensor reads



(c): $y = s + \varepsilon a$, $d = k = 1/t_0$, $h = m/(4t_0)$, $\delta_A = 0$, $\delta_B = 1/(2t_0)$

$$\varepsilon = 0 \Rightarrow \Delta y^* = \Delta B^*/2$$

m : reference mass unit · t_0 : reference time unit

Constructed model values · no empirical data