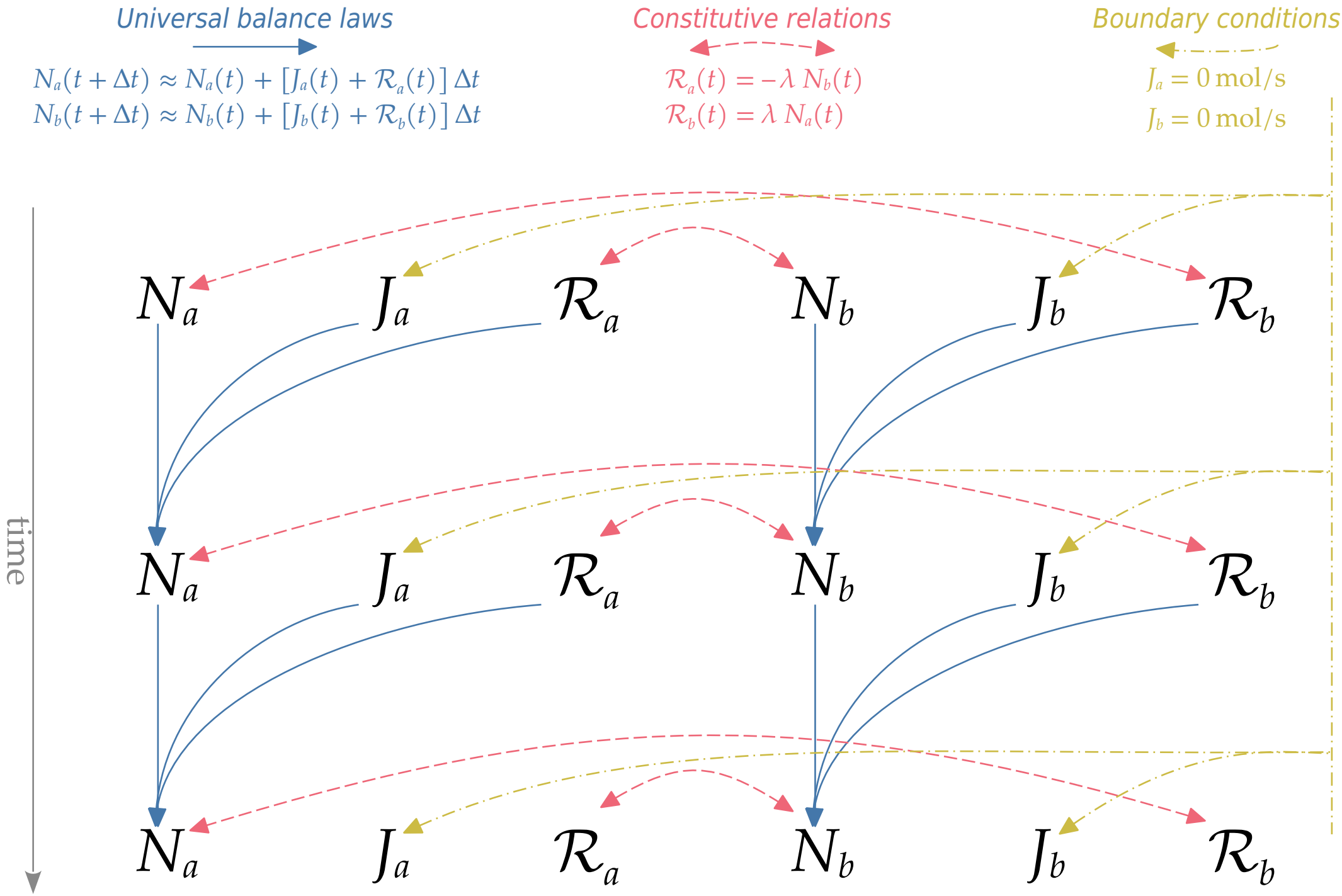
Universal balance laws
$N_a(t+\Delta t) \approx N_a(t) + [J_a(t) + \mathcal{R}_a(t)]\,\Delta t$
$N_b(t+\Delta t) \approx N_b(t) + [J_b(t) + \mathcal{R}_b(t)]\,\Delta t$
Constitutive relations
$\mathcal{R}_a(t) = -\lambda\, N_b(t)$
$\mathcal{R}_b(t) = \lambda\, N_a(t)$
Boundary conditions
$J_a = 0\,\mathrm{mol/s}$
$J_b = 0\,\mathrm{mol/s}$
time
N_a J_a $\mathcal{R}_a$ N_b J_b $\mathcal{R}_b$
N_a J_a $\mathcal{R}_a$ N_b J_b $\mathcal{R}_b$
N_a J_a $\mathcal{R}_a$ N_b J_b $\mathcal{R}_b$