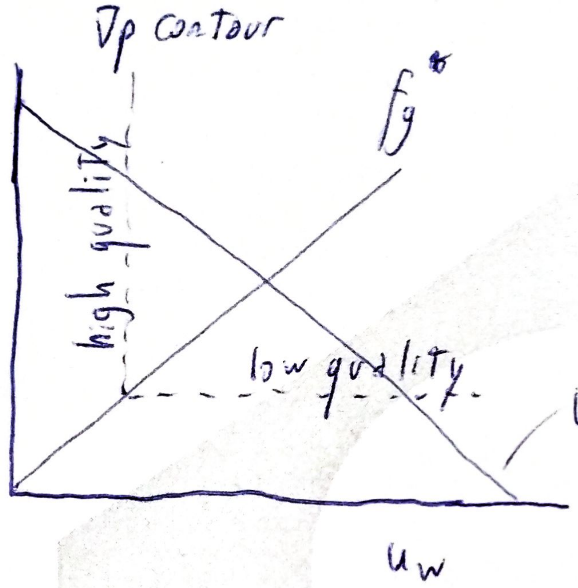
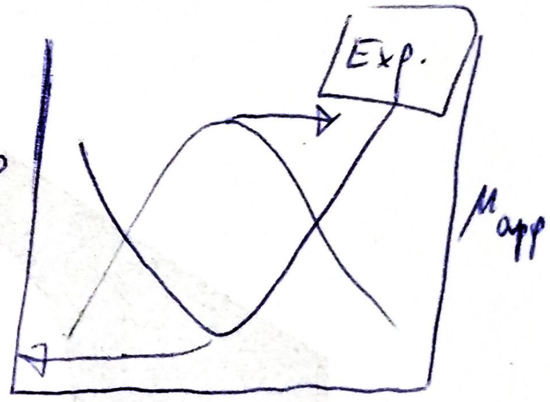
∞





know: ∇p / μ_{app} / f_g

K

U_T = cte / U_g & U_w

$\frac{U_o}{U_w} = 1/4$ (Tang, 2018)

- $U_w = -\frac{K\, k_{rw}(S_w)}{\mu_w} \nabla p \quad \therefore \quad \boxed{k_{rw}(S_w) = -\frac{U_w\, \mu_w}{K\, \nabla p}}$ → solve for $\underline{S_w}$

- $U_o = \frac{U_w}{4} = -\frac{K\, k_{ro}(S_o)}{\mu_o} \nabla p \quad \therefore \quad \boxed{k_{ro}(S_o) = -\frac{U_w}{4} \frac{\mu_o}{K\, \nabla p}}$ → solve for $\underline{S_o}$

- $S_o, S_w, \nabla p$ → evaluate : F_{dry}
F_{shear}
F_{oil}

$$U_T = -\frac{K}{\mu_{app}} \nabla p \therefore \mu_{app} = -\frac{K}{U_T} \nabla p$$

$$\nabla p = -\frac{\mu_{app} \cdot U_T}{K}$$

$U_T = cte = U_w + U_g + U_o$

Tendo f_g e $U_o = 1/4\, U_w$

$f_g = U_g / U_T$

① $\boxed{U_g = f_g \cdot U_T}$

② $U_g + U_w + \underbrace{\frac{1}{4} U_w}_{U_o} = U_T$

$$\boxed{U_w = (U_T - U_g)\frac{4}{5}}$$

③ $\boxed{U_o = \frac{1}{4} U_w}$