$f_{\alpha} = f \cdot f(\alpha) + f($	
target: L(x, L, g, H) = Ezng(z(x, C; b) lag P(x z, C; b) - KL(g(z x, C; b)) P(z c))	
EM algo: $legP(X;\theta) = legP(X_1Z;\theta) - legP(Z X;\theta)$	
consider $C \Rightarrow log P(X C;\theta) = log P(X,Z C;\theta) - log P(Z X,C;\theta) = log \frac{P(X,Z C;\theta)}{P(Z X,C;\theta)}$	
introduce an arbitrary distribution & (2/X/C) D) on both side and integrate vor Z	
$= \int g(z x_1C;\phi) \log P(x c;\theta) dz = \int g(z x_1C;\phi) \frac{P(x_1z c;\theta)}{P(z(x_1C;\theta))} dz$	
$= \int_{\mathcal{R}} (2 \chi_{1}C;\phi) \log \frac{\langle \varphi(\chi_{1}Z C;\phi) \rangle}{\langle \chi(z \chi_{1}C;\phi) \rangle} \frac{\langle \chi(z \chi_{1}C;\phi) \rangle}{\langle \chi(z \chi_{1}C;\phi) \rangle} dz$	
$= \int g(z \chi_{1}C; \phi) \log \frac{ \varphi(\chi_{1}Z C; \phi) }{ g(z \chi_{1}C; \phi) } dz + \int g(z \chi_{1}C; \phi) \log \frac{ g(z \chi_{1}C; \phi) }{ \varphi(z \chi_{1}C; \phi) } dz$	
$= L(\chi_{1}C_{1}g_{1}\theta) + L(\chi_{1}C_{2}g_{1}\chi_{1}C_{2}g_{1}) + P(Z_{1}\chi_{1}C_{2}g_{1}) \geq L(\chi_{1}C_{1}g_{1}g_{1})$ $\geq 0 \Rightarrow lower lower.$	
≥ 0 \Rightarrow lower bound	
$L(\chi, C, g, \theta) = \int \mathcal{L}(z \chi, C; \phi) \log \left(\frac{f(\chi, z C; \phi)}{g(z \chi, C; \phi)} dz \right)$	
$= \int \mathcal{L}(Z X_1C;\phi) \log \left(\frac{P(X Z_1C;\theta)}{\mathcal{L}(Z X_1C;\phi)} \right) dZ$	
$- \left\{ a(z x, \ell; \theta) \right\} + \left\{ a($	
= $\int g(z x,\zeta;\beta) \log P(x z,\zeta;\beta) dz + \int g(z x,\zeta;\beta) \log \left(\frac{PZ(\zeta;\beta)}{g(z x,\zeta;\beta)}\right) dz$ = $Ez_{-g}(z x,\zeta;\beta) \log P(x z,\zeta;\beta) - KL(g(z x,\zeta;\beta) P(z \zeta)) #$	