a. Optimal transport for predicting perturbation responses

unperturbed cells

μ

neural network-based OT map

$T \equiv \nabla \text{🕸}$

x

ν

$T(x)$

unknown perturbation sensitivities ● and ●

predicted perturbed state
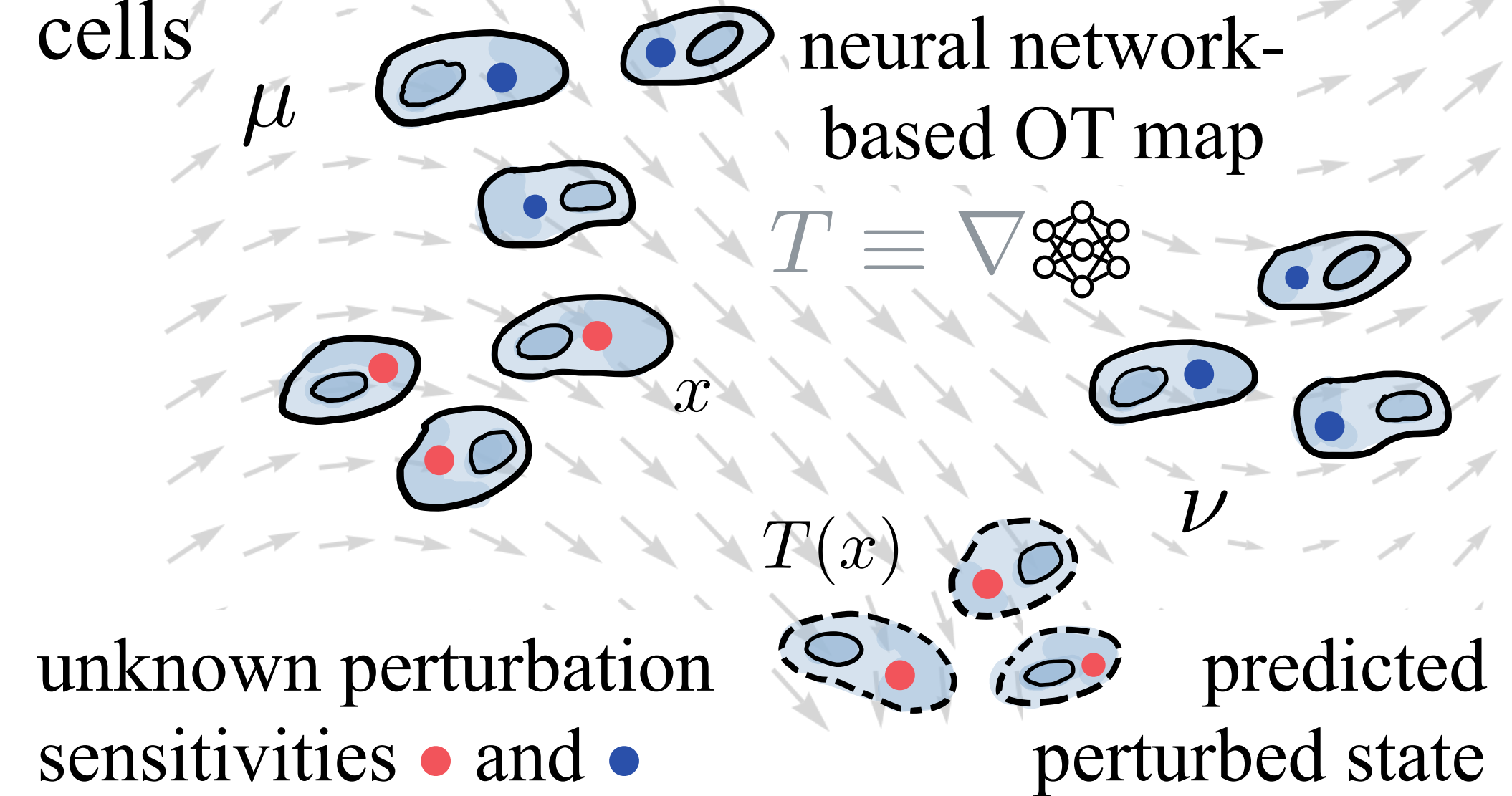
b. Optimal transport for recovering developmental trajectories

feature vector μ_0 measurement snapshot   cell type ● μ_1

undifferentiated cells

μ_t

path

$P_{t,t+1}$

cell data space

$P_{t-1,t}$

cell type ●

$t-1$ t $t+1$ → time