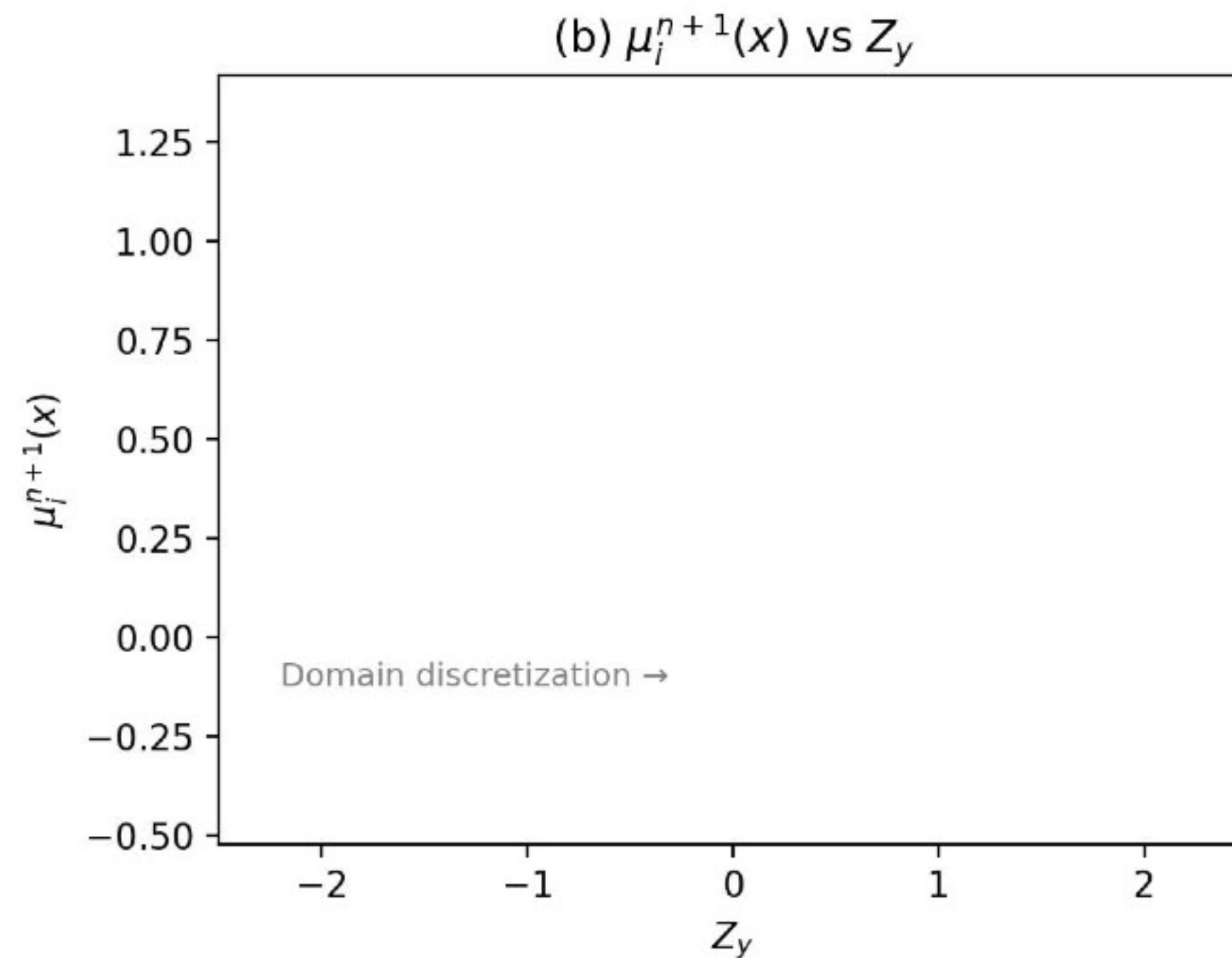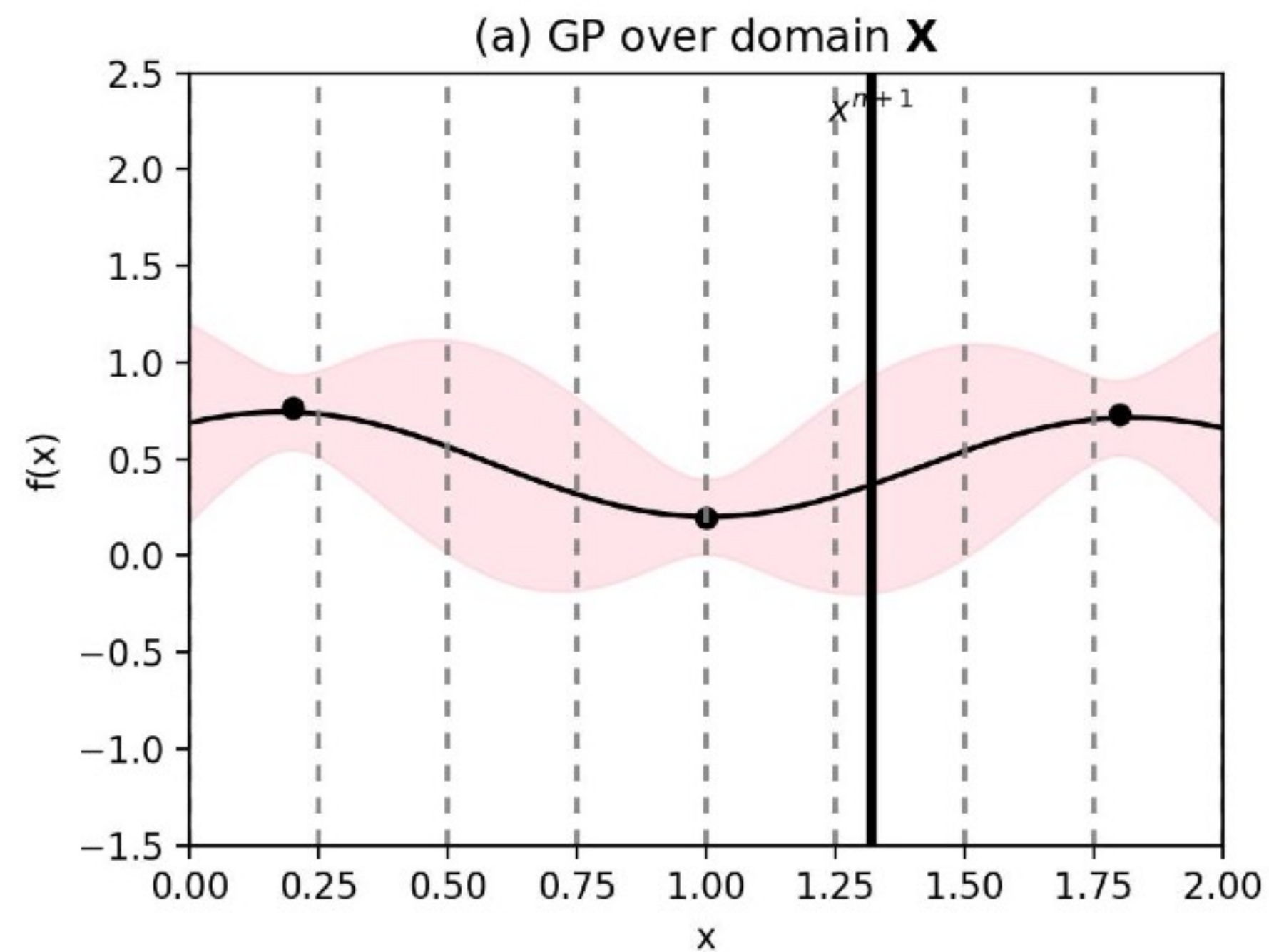# Discretization and Linear-Envelope - 1

Scott et al 2011

The domain X is discretized into a finite set $X_j \{x_1, x_2, \ldots, x_J\}$

Discretization and Linear-Envelope - 2

Scott et al 2011

For each discrete point x_j, an **updated posterior mean** formulation is obtained using the reparameterization trick

(a) GP over domain $\mathbf{X}$

(b) $\mu_i^{n+1}(x)$ vs Z_y

$$\mu_y^{n+1}(x) = \mu_y^n(x) + \tilde{\sigma}_y^n(x, x^{n+1}) Z_y$$