

# Simple Mutations: $n_\sigma = 1$

$\oplus$  equal probability to place an offspring

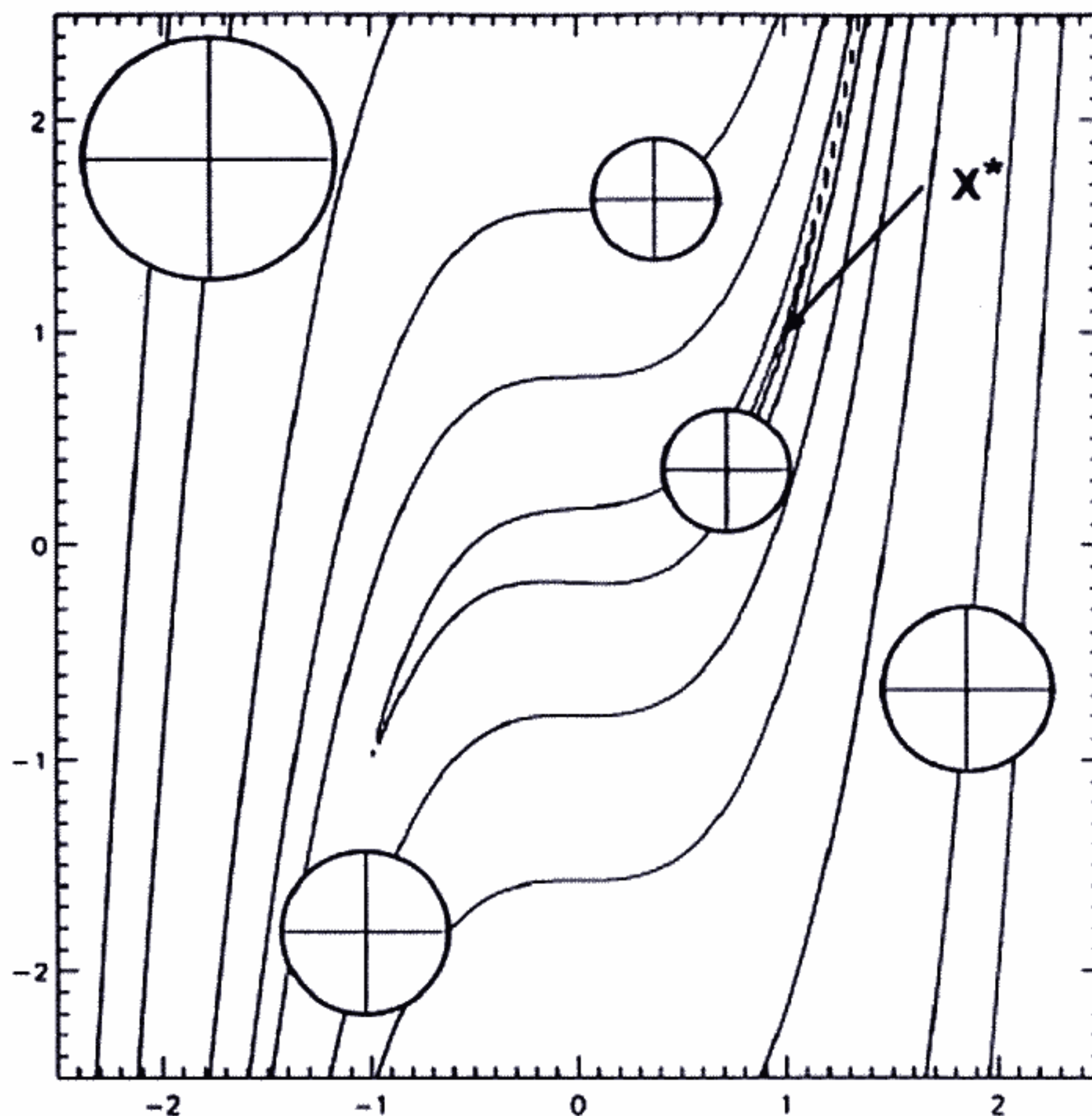


Figure 7: Simple mutations,  $n = 2$ ,  $n_\sigma = 1$ , ( $\Rightarrow n_\alpha = 0$ ).

$$\begin{aligned}
 I &= \mathbb{R}^n \times \mathbb{R}_+ \\
 m'_{\{\tau_0\}}(\vec{x}, \sigma) &= (\vec{x}', \sigma') \\
 \tau_0 &\sim 1/\sqrt{n}
 \end{aligned}$$

$$\begin{aligned}
 \sigma' &= \sigma \cdot \exp(\tau_0 \cdot N(0, 1)) \\
 x'_i &= x_i + \sigma' \cdot N_i(0, 1)
 \end{aligned}$$