# DIFFUSION MODELS

- **Reverse a gradual noising process**



$$p_\theta(\mathbf{x}_{t-1}|\mathbf{x}_t)$$

$$\mathbf{x}_T \longrightarrow \cdots \longrightarrow \mathbf{x}_t \longrightarrow \mathbf{x}_{t-1} \longrightarrow \cdots \longrightarrow \mathbf{x}_0$$

$$q(\mathbf{x}_t|\mathbf{x}_{t-1})$$
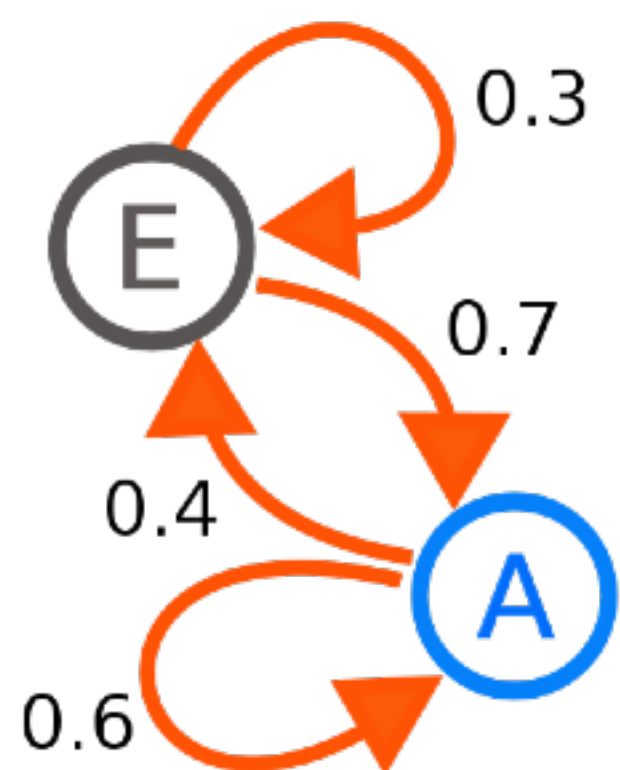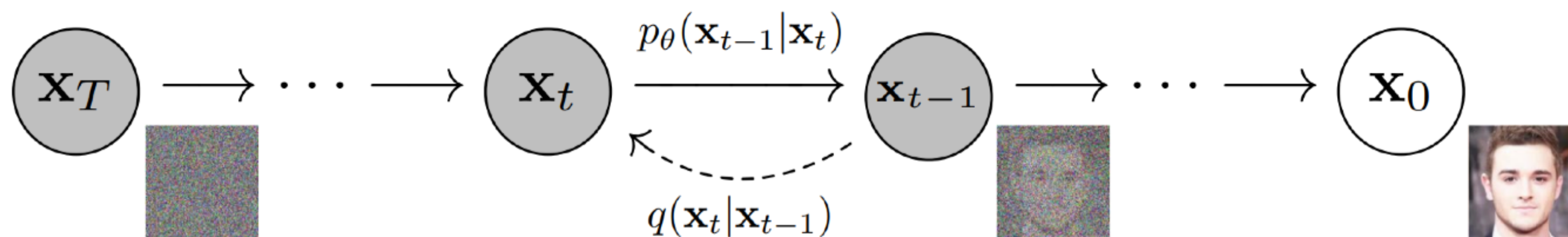
# GLIDE

- **GLIDE was not the first Diffusion Model, its important contribution was in modifying them to allow for text-conditional image generation**



$$p_\theta(\mathbf{x}_{t-1}|\mathbf{x}_t)$$

$$q(\mathbf{x}_t|\mathbf{x}_{t-1})$$
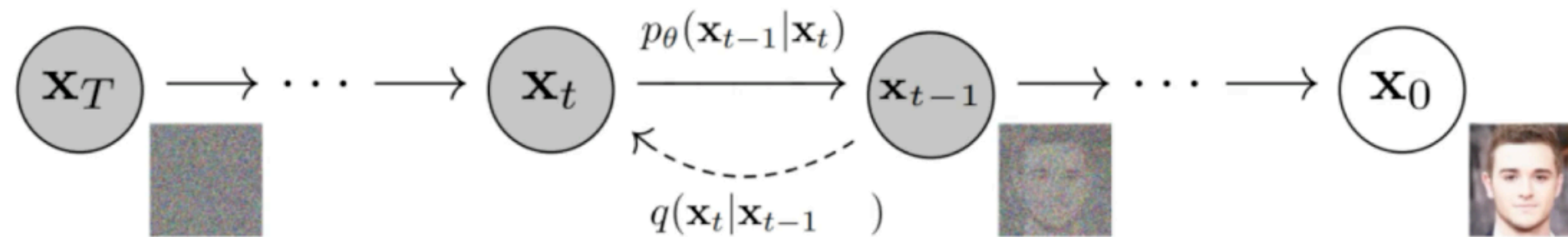
Adding textual
conditioning to the
diffusion process