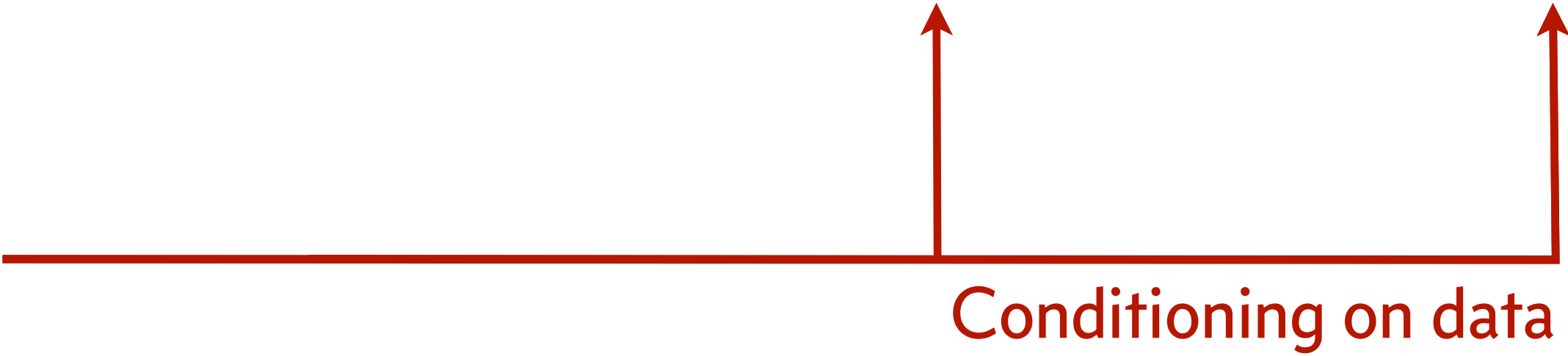


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166



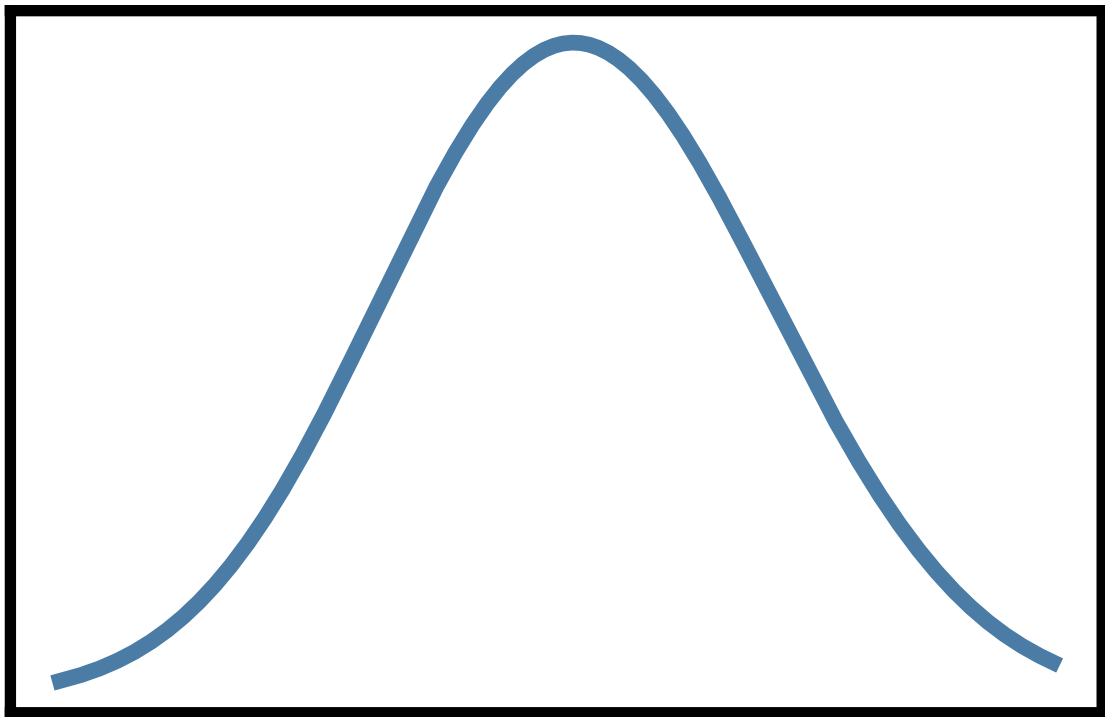
6

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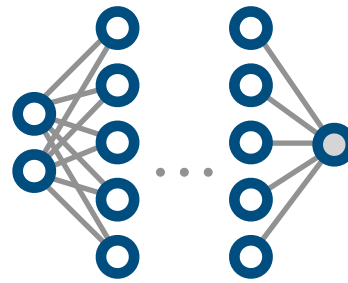
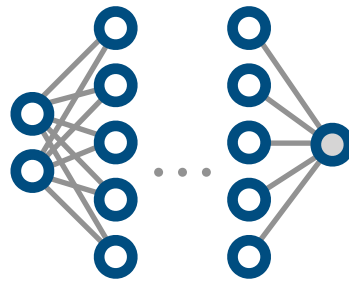
Flow in simulation-based inference

Flows are *not* only employed as *conditional* *posterior* *density* *estimators* in *simulation-based* *inference*

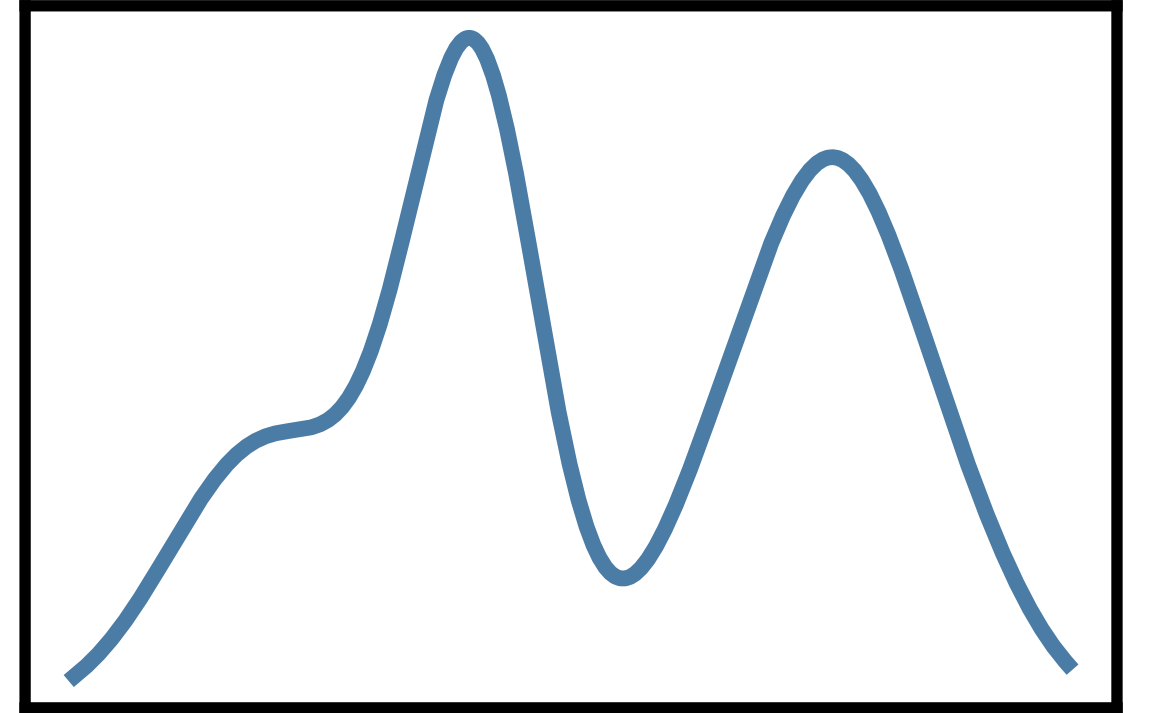
$p(z)$



f_{ϑ}



Posterior distribution $p(\theta | x)$



Density estimation

Optimize $\{g_\varphi, f_g\}$ simultaneously

Data

x



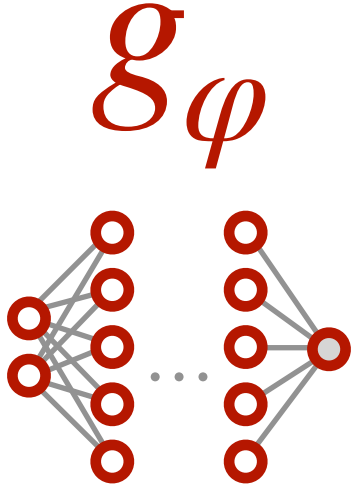
$p(x | \theta) \cdot p(\theta)$



θ

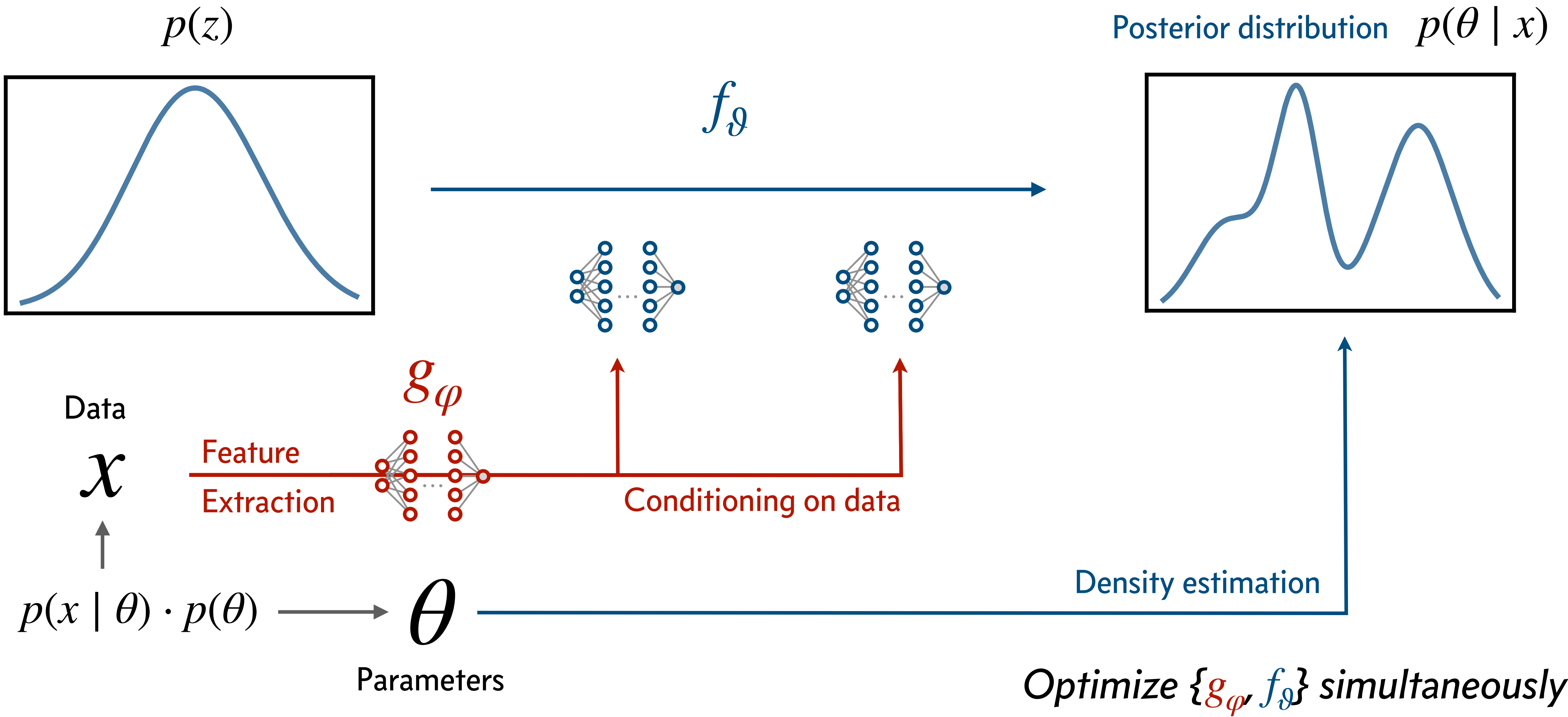
Parameters

Feature
Extraction



Flows in *simulation-based inference*

Flows are commonly employed as *conditional posterior density estimators* in simulation-based inference



Another application: extracting the dark matter distribution from dwarf galaxies

Dwarf galaxies are intermediate-sized galaxies well-suited for studying dark matter

[Nguyen, SM et al 2022]

