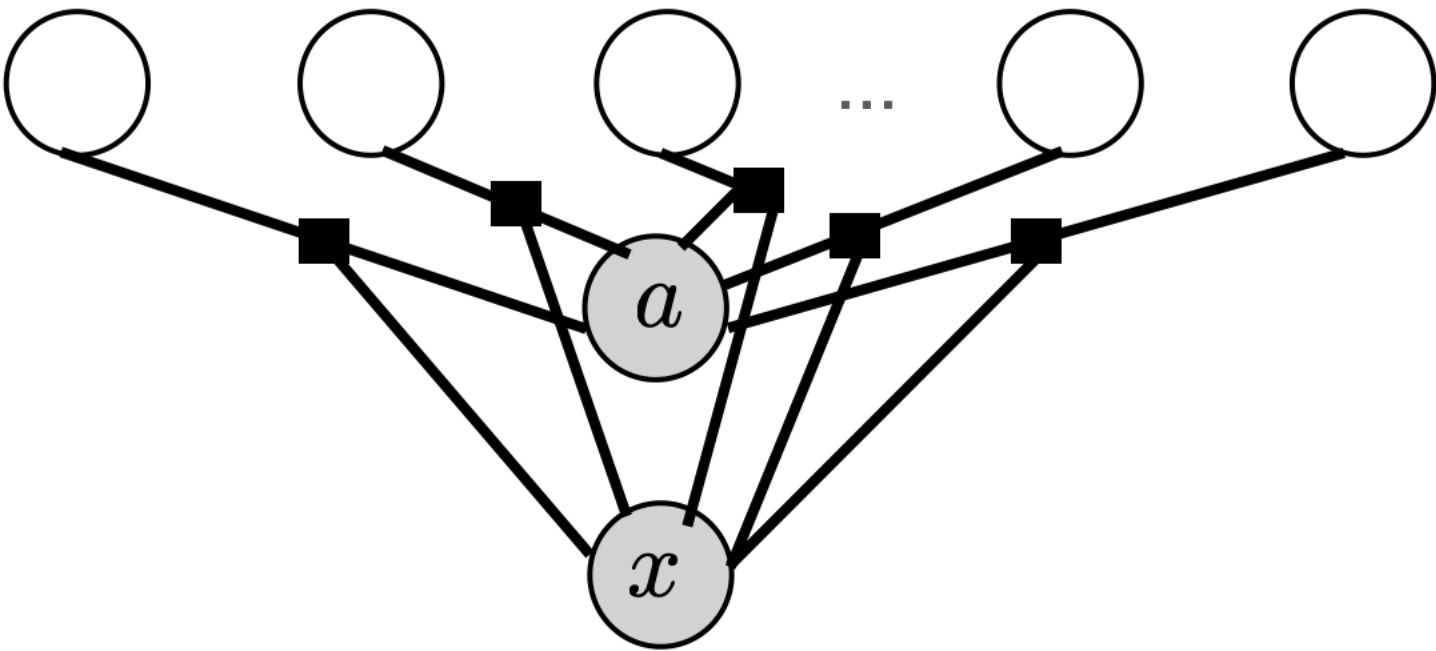with observed alignment variable a

with unobserved alignment variable a