Unbiased estimates

$$\log\left(\mathbb{E}_{p(x)}\, f(x)\right) \overset{?}{\approx} \log\left(\frac{1}{M}\sum_{s=1}^{M} f(x_s)\right) = G$$

$$x_s \sim p(x)$$

$$\mathbb{E}_{p(x)}\, G \neq \log\left(\mathbb{E}_{p(x)}\, f(x)\right)$$