Then $\mathbf{g}^{rep}$ and $\mathbf{g}^{corr}$ are defined as follows:

(I) $\qquad \mathbf{g}^{rep} = \int_{\Omega} p_{\psi}(\boldsymbol{\epsilon}) \nabla_{\psi} f(T(\boldsymbol{\epsilon}, \psi)) d^n \boldsymbol{\epsilon}$

(II) $\qquad \mathbf{g}^{corr} = \int_{\Omega} p_{\psi}(\boldsymbol{\epsilon}) f(T(\boldsymbol{\epsilon}, \psi)) \nabla_{\psi} log(p_{\psi}(\boldsymbol{\epsilon})) d^n \boldsymbol{\epsilon}$