Erratum: Einstein gravity as a symmetry-breaking effect in quantum field theory [Rev. Mod. Phys. 54, 729 (1982)]

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The following clarifications should help in reading Sec. VI:

(1) Equation (6.11) is obtained by substituting Eq. (6.9), with $\theta'=\theta$, into Eq. (6.7). The step from Eq. (6.13) to (6.14) then makes use of Eq. (6.11), with θ replaced by θ^{-1} and with $g'^{R}_{\alpha\beta}$ replaced by $g^{R}_{\alpha\beta}$.

(2) Equation (6.30) is obtained by combining Eq. (6.28b), which can be rewritten as

$$\frac{\delta\bar{g}^{\xi\eta}}{\delta g^{R}_{\alpha\beta}}\frac{\delta}{\delta\bar{g}^{\xi\eta}}\Gamma[\bar{g}^{\lambda\sigma},g^{R}_{\alpha\beta}]+\frac{\delta}{\delta g^{R}_{\alpha\beta}}\Gamma[\bar{g}^{\lambda\sigma},g^{R}_{\alpha\beta}]=0\ ,$$

with Eq. (6.29), which implies the vanishing of the first term on the left-hand side of the above equation.

(3) In Eq. (6.58), $\langle h_{\theta\tau}(0)\rangle$ is a shorthand for $\langle h_{\theta\tau}(0)\rangle_J$, with $J^{\xi\eta}[\bar{g}_{\alpha\beta}]$ the external source current.

(4) In deriving Eq. (6.59), use has been made of the identity

$$0=\int d[\,]\,e^{i\tilde{S}}V^{\mu\nu}(x)V_2^{\alpha\beta}(y)\ ,$$

which follows from Eq. (6.58b) and the fact that $V_2^{\alpha\beta}$ is linear in $h_{\lambda\sigma}$. From this identity we then get

$$\begin{aligned}0&=\langle\mathcal{T}([V_1(x)+V_2(x)]V_2(0))\rangle_0\\&\Longrightarrow\langle\mathcal{T}([V_1(x)+V_2(x)][V_1(0)+V_2(0)])\rangle_0\\&=\langle\mathcal{T}(V_1(x)V_1(0))\rangle_0-\langle\mathcal{T}(V_2(x)V_2(0))\rangle_0\ .\end{aligned}$$

I wish to thank A. Zee for comments on Sec. VI.

In the references, the paper of Brout, Englert, and Gunzig (1978) appeared in Ann. Phys. (N.Y.), not in Ann. Phys. (Paris). The citation of Utiyama and DeWitt (1962) in Sec. VI.D should also refer to DeWitt (1950) [DeWitt, B.S., 1950, Ph.D. thesis (Harvard University), unpublished].