

$$\begin{aligned}
G' \left(b, \frac{q}{\alpha} ; a, \frac{p}{\alpha} \right) &= A \overline{\phi(b)} \phi(a) \\
&+ \overline{\phi(b)} \int dx f(x) [\psi(x, a) + \psi(a, x)] \\
&+ \int dy \overline{f(y)} [\overline{\psi(y, b)} + \overline{\psi(b, y)}] \phi(a) \\
&+ \int dy \phi(y) [\overline{\psi(y, b)} + \overline{\psi(b, y)}] \int dx \overline{\phi(x)} [\psi(x, a) + \psi(a, x)]
\end{aligned}$$

$$A \equiv \sum_{k \neq q-1} \sum_{i \neq p-1} \int Dx \overline{[\dots \phi(x_{k-1}) \psi(x_k, x_{k+1}) \phi(x_{k+2}) \dots]} [\dots \phi(x_{i-1}) \psi(x_i, x_{i+1}) \phi(x_{i+2}) \dots]$$

$$\begin{aligned}
f(x_{p-1}) &\equiv \sum_{k \neq q-1} (\dots \int dx_{p-2} \int dx_p \dots) \\
&\overline{[\dots \phi(x_{k-1}) \psi(x_k, x_{k+1}) \phi(x_{k+2}) \dots]} [\dots \phi(x_{p-2}) \phi(x_p) \dots]
\end{aligned}$$