$$J_a(q) = \bar{\psi}_F(\vec{p}_N)\, \hat{\Gamma}_a\, \psi_B(\vec{p})$$

OUTGOING NUCLEON WAVE FUNCTION — SINGLE NUCLEON CC OPERATOR — BOUND NUCLEON WAVE FUNCTION

.) CURRENT OPERATOR

free nucleon operator

$$\hat{\Gamma}_a = |V_{ud}| \left[F_V \gamma_a + F_M \frac{i}{2M_N} \sigma_{a\beta} q^\beta + F_A \gamma_a \gamma_5 - F_P q_a \gamma_5 \right]$$

$F_{V,M} = F_{1,2}^{p}(Q^2) - F_{1,2}^{n}(Q^2)$ — CC Pauli and Dirac form factors

F_P pseudoscalar form factor

axial form-factor $F_A = \dfrac{g_A}{\left[1 + \frac{Q^2}{M_A^2}\right]^2}$

$g_A \simeq 1.26$

$M_A = 1.026 \pm 0.021$ GeV

$\left(\gamma_5 = -i\gamma^0\gamma^1\gamma^2\gamma^3\right)$