where K_1 and K_2 are constants which may be computed from Eq. (33) if we know the growth properties of F_2 as a function of ω. For instance if $F_2 \to \omega^{-1/2}$ as $\omega \to \infty$, as expected from Regge arguments for the proton-neutron difference, then $K_1 = 8C_2(R)/3$ ($K_1 = 32/9$ for the colored quark model). If F_2 $(\omega-1)^{P(q^2)}$ as $\omega \to 1$, then $K_2 = 4C_2(R)/(P+1)$. For q^2 in the region of several $(\mathrm{GeV})^2$ experiment suggests that $P \approx 3$. With more reliable input data one could try a global fit based on Eq. (33).

The q^2 dependence of $F_L(\omega,q^2)/F_2(\omega,q^2)$ is of course also determined by Eq. (33). Once q^2 is large enough so that $\bar{g}^2/8\pi^2$ is small compared to unity we expect

$$\bar{g}^2 \to A\left(\ln \frac{q^2}{\mu^2}\right)^{-1}, \tag{35}$$

where the constant A is computable. For the colored quark model $A = 8\pi^2/9$. Since $\bar{g}$ is an experimental quantity, Eq. (35) therefore permits an experimental determination of the parameter μ^2. In the renormalization group formalism μ^2 is of course an arbitrary parameter, but we might conventionally define it by requiring a good fit to Eqs. (34) and (35). Defined in this way, μ^2 is a fundamental parameter, which describes the rate at which the strong interactions "turn off" in the deep Euclidean region.

In our previous discussion of the asymptotic inversion assumptions we had to express strong caveats about the uniformity in n of the onset of asymptotic behavior for the moments. The question boiled down to whether one can trust perturbation theory for the anomalous dimensions γ_n, especially with respect to the growth at large n and the