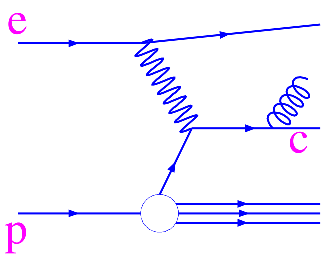
▷ Massless approach $m_c = 0$: number of active flavours $N_f = 4$. Charm is active flavour in p and γ. additional processes occur ($cg \to cg$, $cq \to cq$, $\ldots$).

Absorb FS collinear divergencies into fragmentation function. $\exists$ different (but equivalent) treatments of fragmentation. Indispensable for $p_T \gg m_c$, breaks down for $p_T \leq m_c$. (Kniehl, Kramer, Cacciari, Greco ..)



▷ Variable Flavour Number Scheme:
adjust number of partons N_f according to relevant scale; apply FOPT at low Q^2 and treat charm similar to massless quarks ($N_f = 4$) for $Q^2 \gg m_c^2$;
applicable for inclusive quantities ($\sigma_{tot}, F_2^c, \ldots$)
(Aivazis, Olness, Collins, Tung, ...)

- Scales involved in calculations : renormalization scale μ_R, hadron and photon factorization scales μ_{Fh}, μ_{Fp}.

  Typical scales chosen $\mu_R/\mu = 1$, $\mu_{Fh}/\mu = \mu_{Fp}/\mu = 2$, with
  γp: scale $\mu = m_T(c) = \sqrt{m_c^2 + p_T^2}$
  DIS : scale $\mu = \sqrt{4m_c^2 + Q^2}$