Erratum to: Treatment of the infrared contribution: NLO QED evolution as a pedagogic example

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The final conclusion of this paper is not correct. It was based on our misunderstanding of the treatment of the subtraction term to the NLO ladder diagram given in column 4 of Table 1 of the original calculation of Curci, Furmanski and Petronzio [11]. Contrary to our treatment, Curci et al. do not use the ‘+’ prescription to calculate the NLO contribution in $4 + 2\epsilon$ dimensions. Instead they explicitly trace the cancellation of the singularities caused by the soft gluon emissions between the real and virtual contributions. Thus, it turns out, that the non-singlet structure function and the DGLAP evolution in the physical scheme are exactly the same as in the $\overline{\text{MS}}$ scheme. Therefore the physical approach may be considered as an alternative factorisation scheme.

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