

# Theory summary

- ▶ The **best available prediction** should be preferred for each observable.  
more contributions (operators / loops ) → more accurate prediction  
→ less ambiguities
- ▶ The  $\{m_W, m_Z, G_F\}$  input scheme should be preferred for the EW sector
  - taking  $m_W$  as input avoids gauge-invariance issues in the propagators
  - SMEFT corrections to  $m_W$  are easier to determine, due to hadronic contributions to  $\alpha_{em}(m_Z)$
  - simpler structure of loop corrections and smaller logs
- ▶ Within combinations, all predictions need to be extracted with **consistent** setups (inputs, renormalization scheme etc).  
→ make sure to document how predictions are made / where they are taken from etc.