

# Critical questions about TMDs at EIC

C. Weiss, 14-Aug-14

- **TMDs are compounded from nucleon structure and final–state interactions. What do we learn if we cannot separate the two?**

Discuss gauge link in physical terms: Force acting on outgoing color charge

- **TMDs are not parton densities:  $\int d^2p_T \text{TMD} \neq \text{PDF}$ .  
Is there fga *unified* description of partonic structure?**

- **We do not even understand ordinary ( $p_T$ –integrated) quark fragmentation. How can we hope to learn anything about soft  $p_T$  distributions from SIDIS?**

Only at large  $z$  is SIDIS sensitive to the TMDs in the target.

But this is precisely the region where ordinary fragmentation is *poorly understood*.