Non-Abelian Bosonization and Fractional Quantum Hall Transitions[1] AARON HUI, Cornell University, MICHAEL MULLIGAN, University of California, Riverside, EUN-AH KIM, Cornell University — A fully satisfying theoretical description for the quantum phase transition between fractional quantum Hall plateaus remains an outstanding problem. Experiments indicate scaling exponents that are not readily obtained in conventional theories. Using insights from duality, we describe a class of quantum critical effective theories that produce qualitatively realistic scaling exponents for the transition. We discuss the implications of our results for the physically-relevant interactions controlling this broad class of quantum critical behavior.

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