The longitudinal spin structure of the proton: a theory overview

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I will review recent theoretical progress in our understanding of the longitudinal structure of the proton. My focus will be on the framework provided by perturbative quantum chromodynamics, and will include a discussion on the determination of helicity-dependent, collinear, parton distribution functions. Connections with nonperturbative models of nucleon structure will also be outlined. I will present some open issues in our present knowledge of the proton helicity structure, and comment on how these could be addressed in the future.