The structure of coronal mass ejections (CMEs) has been the center of numerous studies over the past few decades. Defining the magnetic field orientation locally and globally has proven to be a challenging problem, due to the limited nature of observations that we have, as well as our reliance on the current paradigm of highly-twisted flux ropes. Studies suggest that not all CMEs measured in situ fit within the simple twisted and well-organized flux rope topology. Additionally, many of the events that can be well fitted by existing static flux rope models, do not have as simple a structure as that assumed by the models. This is clear from remote observations and multi-spacecraft measurements. With the wealth of data that we have today, as well as the affluence of research and analysis performed over the last 40 years, it is due time to present an alternative paradigm, that better represents those data. In this work, we discuss this new paradigm and the literature leading to it.