In this chapter a scenario about the detailed relationship of strong and weak interactions is discussed. In this picture classical electroweak interactions are basically local and only these appear in the TGD analogs of fundamental interactions vertices describing splitting and reconnection of monopole flux tubes. Also strong interactions can be assigned to these topological interactions. The basic problem is to understand how strong interaction can be parity conserving while the classical electroweak dynamics violates parity conservation.

The proposed model, argued to overcome this problem, involves several topological elements.

1. The topological explanation of the family replication phenomenon in terms of the genus of partonic 2-surface carrying fermion lines as boundaries of string world sheets.

2. The view of holography as a 4-D analog of holomorphy reducing to 2-D holomorphy for partonic 2-surfaces. This predicts two kinds of partonic 2-surfaces as complex 2-surfaces in CP_2 with a spherical topology. Tor the homologically non-trivial geodesic sphere induced weak fields vanish (no parity violation classically) and for the second complex sphere they do not. A natural working hypothesis is that these two spheres explain the difference between strong and weak interactions.

3. The homology (Kähler magnetic) charge h of the partonic 2-surface correlates with the genus of the partonic 2-surface. For complex partonic 2-surfaces in CP_2, the genus is given $g = (h-1)(h-2)/2 - s$, where s is the number of singularities. Only the genera $g = (h-1)(h-2)/2$ are free of singularities. For $g = 0$, this includes $h = 1$ and $h = 2$. Already for $g = 2$ there would be singularity. It is however possible to overcome this problem since partonic 2-surfaces can be deformed to M^4 degrees of freedom and one can add handles in this way. A rather detailed picture of partonic 2-surfaces and monopole flux tubes emerges.