and 0 respectively in these three cases. Every representation then has a value of τ and if representation $\underset{\sim}{c}$ occurs in the reduction of $\underset{\sim}{a} \times \underset{\sim}{b}$, we have

$$\tau_c = \tau_a + \tau_b \pmod 3 \quad .$$

All the representations that have been identified among the hadrons have triality 0. (These are the ones we have referred to as tensor rather than spinor representations.) The first possibility we may consider is that the other representations, with $\tau = \pm 1$, do not occur. This situation may be perfectly compatible with the bootstrap hypothesis and it may very well be the case in reality.

In a Lagrangian field theory, a fairly complicated picture is necessary, as remarked in the first section, to arrive at SU(3) with $\tau = 0$ only; for example, there is the original hypothesis of eight baryons and eight Yang-Mills type vector mesons. A Lagrangian field theory with a fundamental triplet of fields could give a world without real particles of $\tau = \pm 1$ only if something very peculiar happens, which amounts to giving the triplets infinite mass but also infinite binding energy when they combine to form $\tau = 0$ particles!

The remainder of our discussion will be devoted to the hypothetical case that real hadrons exist with $\tau = \pm 1$. Such a situation is clearly compatible with a theory, say a Lagrangian field theory, based on a fundamental triplet (with perhaps some other basic entities) and it may also be compatible with the bootstrap hypothesis.