One of the distinguishing features of higher algebra is the difficulty of constructing quotients. In this talk I will explain a new technique for constructing algebra structures on quotients. This technique allows us to prove that $S/8$ is an $E_1$-algebra, $S/32$ is an $E_2$-algebra, $S/p^{n+1}$ is an $E_n$-algebra at odd primes and, more generally, for every $h$ and $n$ there exist generalized Moore spectra of type $h$ which admit an $E_n$-algebra structure.