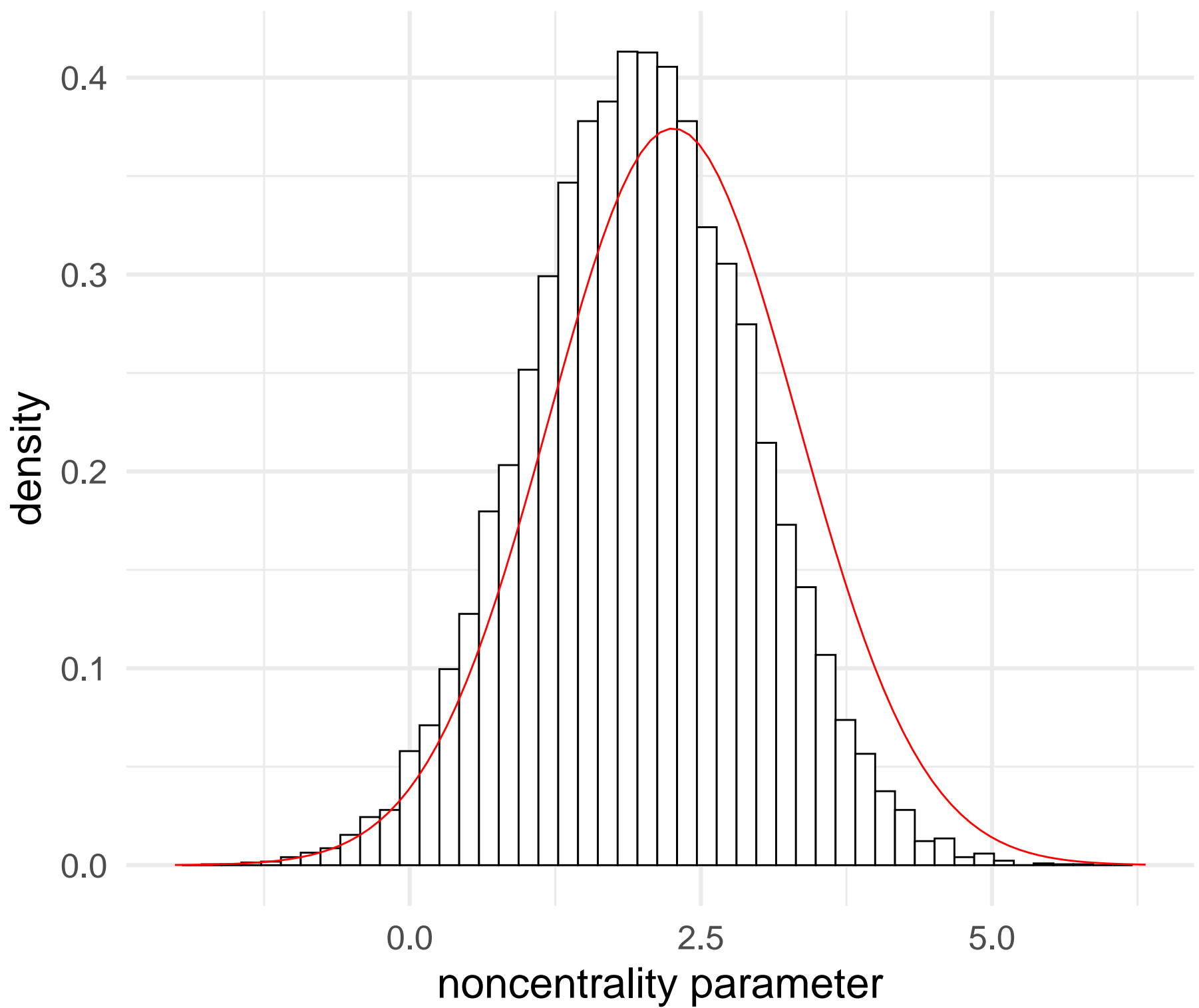histogram of 12991 noncentrality parameters