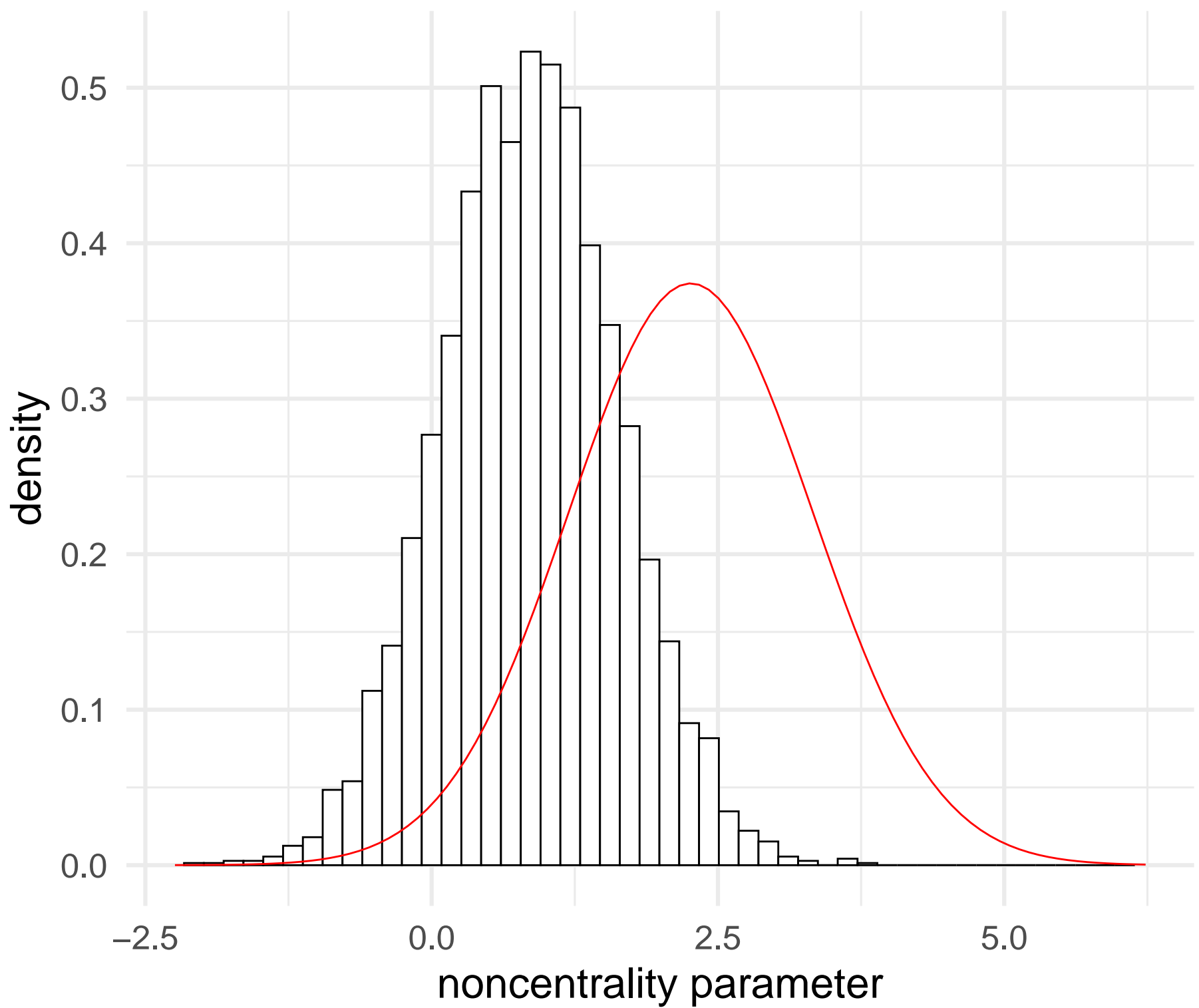histogram of 4177 noncentrality parameters