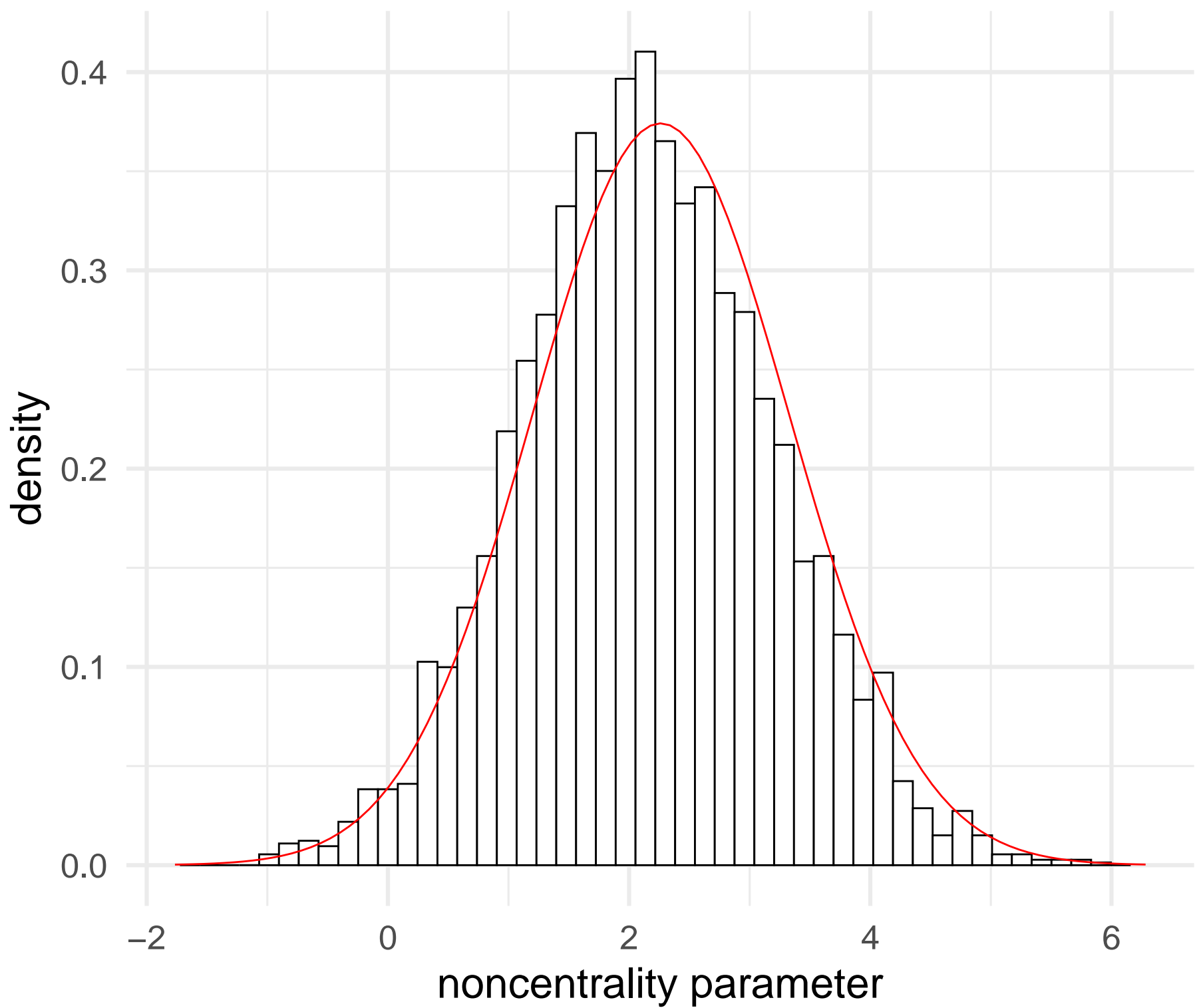histogram of 4451 noncentrality parameters