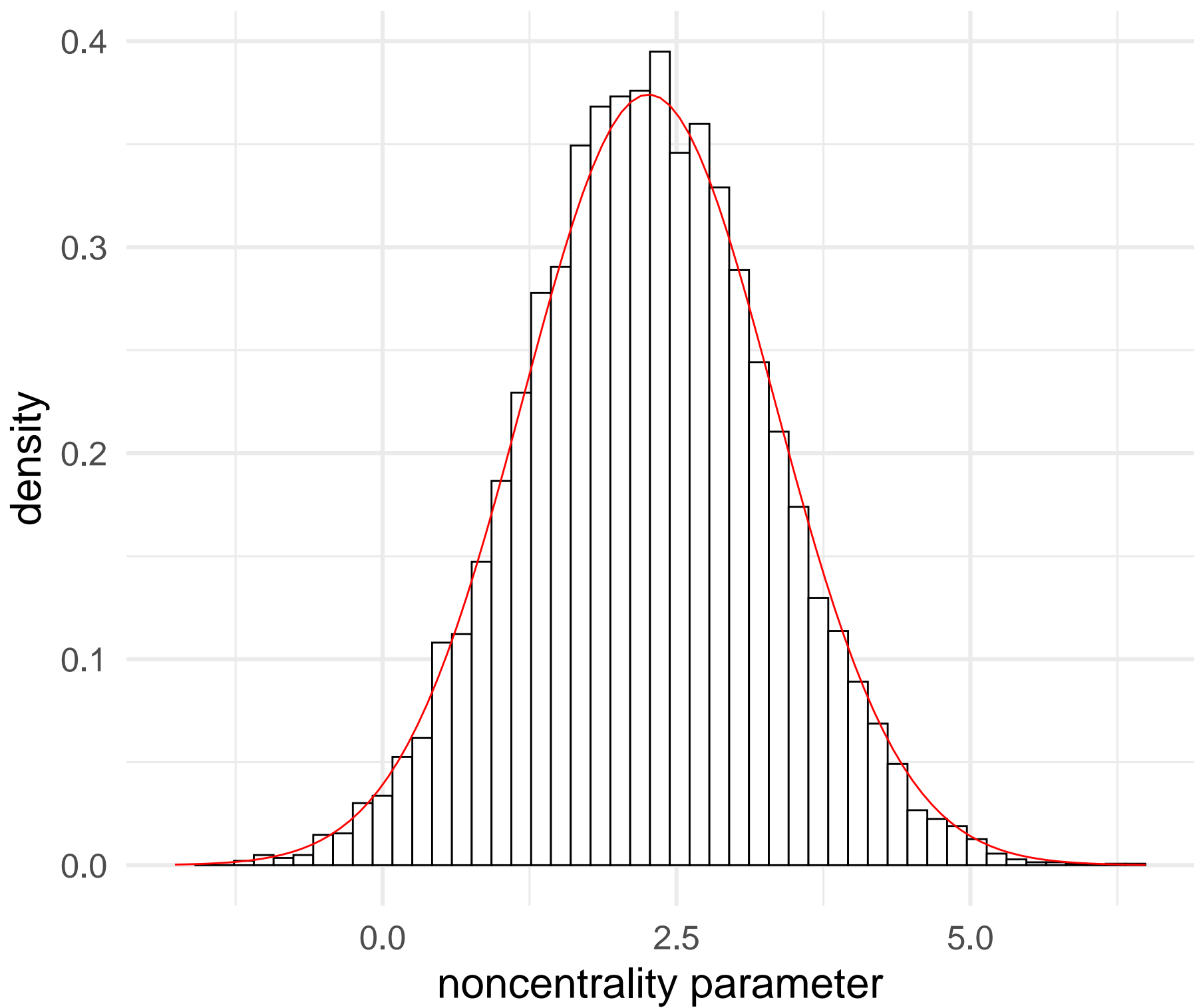histogram of 8461 noncentrality parameters