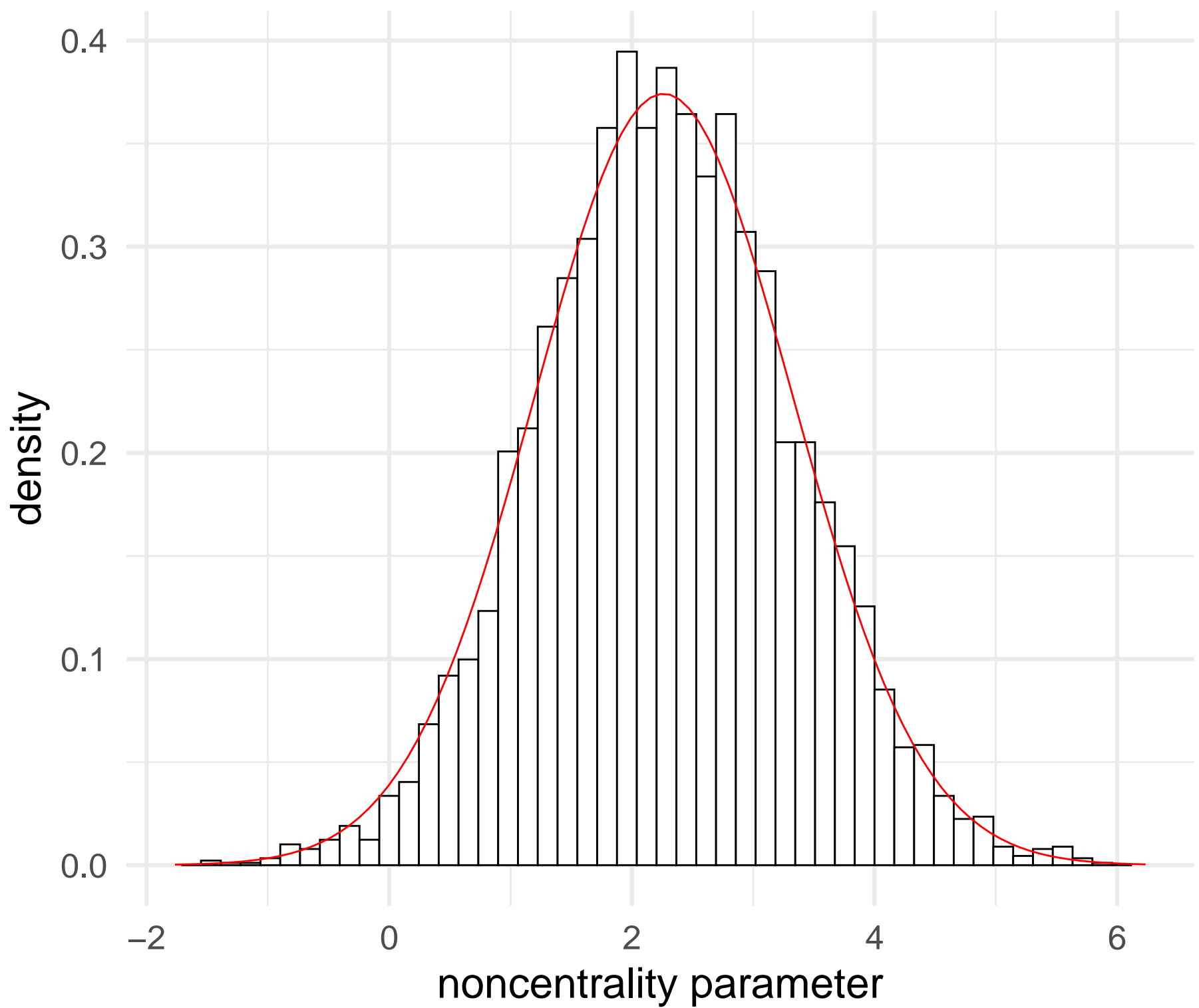histogram of 5464 noncentrality parameters